

California State Journal of Medicine.

Owned and Published Monthly by the

Medical Society of the State of California

PHILIP MILLS JONES, M. D., Secretary and Editor
PUBLICATION COMMITTEE.

Geo. H. Kress, M. D. René Bine, M. D.
Pauline Nusbaumer, M. D. Sol. Hyman, M. D.
R. E. Bering, M. D., Chairman Advertising Committee.

ADDRESS ALL COMMUNICATIONS

Secretary State Society, - - - Butler Building,
State Journal, - - - San Francisco.
Official Register, - - -

Telephone Douglas 2537

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Notify the office promptly of any change of address, in order that mailing list and addresses in the Register may be corrected.

VOL. XI MARCH, 1913. No. 3

EDITORIAL NOTES

MEDICAL DEFENSE NOTES.

Each month the JOURNAL will discuss some question relating to the Medical Defense work of the State Society and as these notes of information or discussion may be of the greatest interest to you at any time, you had better look for them. The most important point is, of course, for you to be sure that your dues are always paid up so that at no time are you delinquent; the Society will not defend any suit if the physician defendant was not paid up at the time the alleged malpractice occurred and also at the time when the suit is filed. The importance of paying your dues is of moment to you and not to the Society; the few dollars—the four dollars, to be exact—is a mere drop in the bucket to the Society; but the cost of defending a suit would mean a good many hundred dollars to you. Of course, you may never be sued; and then again, you may be sued to-morrow. And just remember, too, that the State Society Medical Defense is real defense; it is not like insurance where the company will get out of defending a suit if it can by any technicality do so. We took charge of just such a case in San Francisco. The doctor was insured but on a technicality the company refused to defend him. The Society looked out for him, a demurrer was introduced and the case thrown out of court. On January 31st a judgment for \$3,000 was given against a physician in Los Angeles not a member of the Society but who had paid for "insurance" and was, more or less, defended by the insurance company. A couple of months before that another physician in the same place, Los Angeles, also defended by an insurance company, had a judgment against him of \$2,500. Does that sort of "insurance" do you much good?

IMPORTANT SUIT WON.

On January 28th a most important suit against a member of the Society, Dr. C. A. Shepard, was begun in Los Angeles and lasted over a period of seven days' trial, resulting in a verdict for Dr. Shepard. The suit was for \$50,000 and it was alleged that he had fraudulently or untruthfully diagnosed a case of tuberculosis when in truth the patient did not have tuberculosis. We all know that it is of the greatest importance to the patient suffering from beginning tuberculosis to have the condition recognized early and long before the sputum is filled with bacilli. Had this most unjust suit been won by the plaintiff a number of similar suits would have been filed against physicians specializing in tuberculosis work and if we may judge by the results when such suits are defended by "insurance" companies, the plaintiff would have secured a verdict. Dr. Shepard writes: "I am proud to belong to a State Society that takes such good care of its members in such blackmail cases. The able defense put up by Mr. H. T. Morrow, the attorney for the Society, and the indefatigable efforts of the Secretary of the Los Angeles County Association, Dr. Geo. H. Kress, with the willing assistance of the members of the Society who left their offices and patients to testify on my behalf is certainly very gratifying." Is it better to keep your dues paid up and get this sort of defense or to let them lapse and depend on the chances of an "insurance" company's defense?

DID NOT UNDERSTAND.

A number of our members seem to have quite misunderstood the suggestion made in the JOURNAL a month or so ago to the effect that the medical defense rules be changed so that suits based on fracture cases would not be defended unless the member had had a consultant at the time he set the fracture, or a good reason for not having had one. Some members thought that was an attempt to get out of defending a good many suits. Not at all; that idea was never dreamed of. The idea back of the suggestion was that it would make it so much easier to win these suits if another physician was present when the patient was treated and could testify to the fact that the fracture had been properly set and dressed. So many suits are coming along that we must do everything that we possibly can to protect ourselves and it was with the idea of making our own protection just so much more secure, that the suggestion was made. There has never been the slightest intimation on the part of any member of the Council, of the Medical Defense Committee, of the Secretary or of our attorneys that we should take advantage of technicalities to get out of defending suits or make any rules that would tend to that. On the contrary, a number of suits have been defended wherein the Society was not absolutely and according to the letter; obliged to undertake the work. But we have felt that it was a moral obligation and that it would be the wish of the members to construe the whole matter most liberally. For instance, we defended a suit against a doctor brought by the father of his patient; the father was violent and

apparently insane and the doctor had him arrested for examination as to his sanity. He escaped and brought suit for damages against the doctor. He was not the doctor's patient and it was not "malpractice" but the doctor had got into the trouble in the regular course of his professional work and we all agreed that the Society should defend him. The case was two days and a half in court and the doctor won. Nufsed? That member might have had insurance in every company in existence but he would not have been defended by any of them; he would have had to pay for his own defense if he had not been a member of the State Society. Worthwhile?

ALL'S WELL, THAT ENDS WELL.

About a year ago we were shocked to learn that the firm of Squibb had forsaken the principles which enabled its founder, Dr. E. R. Squibb, to build up the business which so long has enjoyed the complete confidence of the medical profession, and has gone into the proprietary medicine business. The proprietary which the firm was shown to be exploiting was not of the kind that most pharmaceutical houses feel justified or obliged to put out because "everybody's doing it," namely a shot-gun mixture ("ethical specialty") asserted to have been somebody's favorite prescription and provided with a therapeutic title. Instead, the Squibb proprietary belonged to the type which makes use of some drug whose action is well known and positive, to which some addition is made, which it was claimed vastly improves the previously used preparations of the medicament. As is customary in such cases, the preparation was marketed under vague and misleading claims as to composition, and provided with a misleading name. The preparation was called Thoremadin and on examination was found to be a sulphuric acid paste consisting of sulphuric acid, made into a paste with inert lead sulphate and "doctored up" with some radio-active earths, chiefly thorium sulphate. The nature of the preparation was brought out in a report by Dr. W. A. Pusey who, from experiments, became convinced that the preparation owed its virtues to sulphuric acid only. This was confirmed by the analysis made in the A. M. A. Laboratory (Jour. A. M. A., March 7, 1912, p. 716).

While so far the recited events are commonplace, the sequel is not. It shows that, though in new hands, the house of E. R. Squibb and Sons proposes to retain the confidence and respect of the medical profession.

Shortly after Pusey's article and the A. M. A. Chemical Laboratory analysis had appeared, the firm stated how it had come to be connected with the preparation—it was a story of a persuasive "promoter" and a few over-enthusiastic practitioners. At the same time the firm announced (Jour. A. M. A., April 13, 1912, p. 1135) that the product had been submitted to the Council on Pharmacy and Chemistry and that its sale would be discontinued, if the finding of Pusey—that radio-activity played no material part in its action—was confirmed by the Council.

The Council now has published its report (Jour. A. M. A., Feb. 8, 1913, p. 462) which is to the effect that, when tried side by side with a simple sulphuric acid mixture, experts were unable to distinguish any difference in action between these two preparations. Thoremadin thus having been shown to depend for its action on sulphuric acid, the claims to be unfounded and the name to be misleading, the house of Squibb announces that, in accordance with its agreement, it has now discontinued the sale of Thoremadin.

While the action of the firm is nothing more than what would be expected of a concern wishing to do an honest business, nevertheless, the temptations of proprietary exploitation nowadays are so great that the firm should be given credit for its action. Beyond this, however, the medical profession should feel satisfaction in the knowledge that there is at least one large pharmaceutical house which has in the past and no doubt will in the future, taboo the proprietary medicine business.

DISCOURAGING WORK.

The prosecution of illegal, unlicensed, practitioners of medicine is, in most places at least, a heart-breaking work. It is almost impossible to get a square deal in a police court; the evidence may be complete and without flaw, but for personal or political reasons the judge will discharge or suspend sentence or dismiss the case. In Los Angeles a lot of very good work has been done and good results have been obtained, but that was largely due to the tremendous energy of one man, Mr. Morrow, and to the fact that the city was so aggravatingly overrun with advertising quacks that the public—or a goodly portion of it—was disgusted and in sympathy. In Oakland some result has been obtained but only after great effort, at considerable expense and with many disheartening setbacks. As an illustration we publish, on another page, a portion of the record in the case against an unlicensed person who was convicted. It is illuminating. When a judge of a superior court will voice the sentiments which emanated from the court in this case, one may well say "what's the use!" and quit.

CHINESE MEDICINE.

The Pacific Coast members of the medical profession have had very definite notions concerning the absurdities of so-called Chinese medicine. Elsewhere in this issue is printed an article on the subject by a medical missionary, Dr. C. R. Roys of Wei-hsien, China, who discusses the subject from a wide and first hand knowledge. His paper on the subject is therefore of real value. Not the least of what Dr. Roys states is the point which he makes, judging from the newspaper advertisements and sign-board publicity of American patent medicines akin to those of the Chinese, that we of our own land are after all not so greatly superior to the heathen (?) upon whom we would look down with such scorn and pity.

MISPLACED CONFIDENCE.

A member of the Society writes us as follows and sends a copy of some advertising "literature": "I was under the impression that this firm (Lehn & Fink) pretended that it advertised its products only to the profession. Here is a pamphlet which has been mailed to a number of my patients." The title of the pamphlet is Rheumatism and Gout; their Symptoms, Causes, Prevention and Cure. The booklet follows the usual form of cheap "patent medicine" advertising and to read it one would feel quite sure that the only thing in the world that could cure him of rheumatism or gout is Piperazine Water. No, confiding member, your confidence was sadly placed; this firm, like a good many others, notably Frederick Stearns, would like to get all they can out of the doctor—and also get all they can out of the doctor's patients direct!

REPORTING COMMUNICABLE DISEASES.

At the conference of the various state health authorities with the Public Health Service held in Washington June 1, 1912, a resolution was adopted the purpose of which is to put into operation a co-operative plan "by which information of the current occurrence and geographic distribution of the communicable diseases would be available to the respective health authorities." The idea is a very good one and should be appreciated by all health officers in every part of the country. These reports go to the Surgeon General of the Public Health Service, are then compiled and put together and are issued in the weekly bulletin of the service which has a wide circulation; thus every health officer knows in the shortest possible time just what the conditions in regard to communicable diseases are in every other part of the country. "Whenever in any locality within a state there is an unusual outbreak or sudden increase in the number of cases of any of the following diseases, the Surgeon General should be notified by telegram (collect) followed by letter: Smallpox, typhoid fever, scarlet fever, epidemic poliomyelitis, diphtheria, epidemic cerebrospinal meningitis." All health officers in California should earnestly co-operate with the Public Health Service in this most important and valuable work.

OPHTHALMOLOGICAL CONGRESS.

The twelfth International Congress of Ophthalmology will be held in St. Petersburg August 10 to 15, 1914. We quote the following from the first official circular:

"Members who want to communicate reports to the Congress are obliged to send off the manuscript with the inscription fee to the central bureau in St. Petersburg, Ophthalmic Hospital, Mocho-waja 38 to the General Secretary Dr. Th. Germann not later than the 1st of February 1914. The reports must be written in one of the official languages of the Congress: English, French, German, Italian, Spanish or Russian; the extension of each work must not pass over 5 pages, the

usual length of reports on the preceding congresses. The manuscript must be written with the machine."

MEDICAL BILLS IN THE LEGISLATURE.

In discussing the various bills which have been introduced in the present legislature, and they are more numerous and more dangerous than at any previous session of the legislature in the history of the State, a few fundamental facts must be remembered.

A license to practice medicine or any mode of treating the sick or afflicted is not a piece of property given to an individual; it is a police license intended for the protection of the people and not for the benefit of the person to whom it is issued.

All such licenses, wherever issued, had their origin in the fact that uneducated and unqualified persons were desirous of making money out of sick people. At first all licenses were issued upon the presentation of a diploma from a medical school, which was originally considered to be evidence that the holder had studied medicine. It was soon found that a diploma meant nothing because unscrupulous persons formed "colleges" or "schools" which sold diplomas for sums ranging from \$50 up.

License based on examination was the next step; the examination given by the licensing body and not by the body issuing the diploma. The first state to base the issuance of a police license to practice medicine on an examination conducted by the licensing body, was New York, in which state the law went into effect in 1891.

Reciprocity, or the recognition by one state of a license issued in another state, first came about after several states had followed the example set by New York and issued licenses based on an actual examination. The principle of this reciprocity was that one state would recognize as satisfactory, the examination which had been given by another state; the actual license was secondary to a careful inspection of credentials and a satisfactory examination of the applicant, by the issuing state.

As it became harder for uneducated persons to obtain license to practice medicine, other systems or modes of treating the sick or afflicted were "discovered" and the followers of these systems asked for special licensing boards in their special systems, claiming that, as they did not wish to practice "medicine," but merely their special "mode," they should not be required to take the regular examination. But it was quite evident that, as a matter of fact, no matter what they said they wanted to practice, they all actually practiced medicine; or at least they all treated sick or afflicted persons in whatsoever way they saw fit.

The fundamental point of all laws regulating the requirements for a license for anyone to treat the sick or afflicted, is this:

Before being allowed by the state to treat a sick or afflicted person, the individual should be required to prove that he knows how the body is

made (anatomy); how it is supposed to perform its functions (physiology), and what accidents or material afflictions are liable to occur to it.

That would seem to be little enough and simple enough protection for the people; and bear in mind that the law is supposed to be only for the protection of the people. If it is for the protection of the people and is really going to *protect*, the law should provide some way of determining that the applicant actually possesses a minimum knowledge of the make-up, functions and afflictions of the human animal. Under present conditions, with a large number of physicians in the United States who bought diplomas or who obtained them after very little and very poor instruction and with another large number of followers of various "systems" or "schools" or modes of treatment which they claim to be not "medical" but something better, the only way that this minimum knowledge can be determined is by submitting the applicant to a proper examination either here or in some other state.

Special boards of examiners for special "modes" or "schools" should not be permitted, for all treat the sick or afflicted and so all should be required to show evidence of the same minimum knowledge. But those who cannot show the possession of this minimum knowledge fight the law and cry for special boards or lower standards and have all sorts of bills introduced into the legislature, not to protect the people but to permit them, the unqualified, to treat sick or afflicted persons.

Senate Bill 510, Gates, (same as A. B. 425, Ambrose) is a type of bills lowering standards. It provides for three boards of examiners; "a board of medical examiners, a board of drugless examiners and a board of registration of religious practitioners." The title of the act is "To regulate the practice of medicine, surgery and other systems or modes of treating the sick or afflicted," etc. Thus it is evident that *all who come under it are to do the same things*. But we find that those in the first class must comply with all present requirements and take an examination; those in the second class need have no preliminary education and but two years' study in some school of drugless healing and in addition the law licenses all osteopaths, chiropractors, naturopaths and any other breed of drugless healer—in fact anyone who has joined the "federation of liberal physicians, surgeons and healers" before July 1st, 1913! In the third class, practically no requirements are demanded.

Senate bills 652 and 653, Butler, (corresponding, in all essentials, to A. B. 355, Gelder) have for their special provision the issuing of a license to anyone to practice "a special branch of medicine and surgery." The applicant need have no medical training but he must make affidavit to having studied this "special branch" for at least 17 years. These bills are, apparently, intended to license Bohanon the cancer quack of Oakland. Gelder, who introduced the bill in the assembly, is Bohanon's lawyer.

Assembly bill 501, Gelder, creates a board of

eclectic examiners and does a number of other things; it is so drawn as to compel the eclectic board to issue a license to Bohanon and it would license, without examination, nearly every physician or osteopath who was licensed in any state or territory prior to 1906.

Senate bill 125, Gerdes, (corresponding to A. B. 304, Scott, and A. B. 347, Schmitt) would license in this state, without examination, anyone who was licensed in any state or territory prior to 1896. Prior to 1896 there were very few states with any requirements at all and diploma mills flourished, the holders of such purchased diplomas finding no difficulty in having them registered and a license issued in most of the states. All of this class could come to California and be licensed without examination and without even a scrutiny of the diploma, if any, on which the old license was issued. With such an amendment California might as well have no law at all, for only those who have a good chance of passing the examination and recent graduates, would have to take an examination.

Senate bill 430, Gates, (corresponds to A. B. 309, Woodley) creates a board of examiners of "chiropractic" and licenses, without examination, all who hold certificates from the "association of chiropractors" or the "federated chiropractors of California." It requires no preliminary education and in technical education this only: the applicant must have "to his or her credit a two years' course of study"—no actual work is required; merely *credit* for two years.

A. B. 731, Gates, provides an entirely new board adding two naturopaths to the board, doing away with the standard of preliminary education now provided for and going back to the plan of allowing the superintendent of public instruction or any deputy superintendent to issue a certificate of preliminary education on which the student can enter a medical school. Experience has shown us that this amounts to no requirement at all.

A. B. 732, Kuck, provides for a license for those practicing a special branch and is evidently another "Bohanon" amendment.

A. B. 820, Roberts, would allow anyone to practice nursing, massage, osteopathy, chiropractic or naturopathy without any license if they do not prescribe medicine or do surgery. At the present time no license is required for nursing or massage, so the bill would only have the result of allowing all these other people to practice medicine without a license.

A. B. 821, Roberts, has a good clause and a bad clause. It provides for reciprocity where the license is issued after an examination and where standards are no lower than those in California; but it also provides for the licensing of those practicing a special branch—another "Bohanon" amendment.

A. B. 932, Ryan, provides for a special board of examiners in mechanotherapy. The iniquitousness of special boards has already been pointed out.

A. B. 946, Bloodgood, makes some changes in wording of the section licensing army and navy

surgeons and allows those on active duty or relieved from duty to get a license without examination.

A. B. 961, Bloodgood, extends wide open reciprocity for everyone having a license anywhere, including osteopaths, and licenses here, without examination, any graduate of any school that is recognized by the licensing board in its home state. Under this act, no one would ever be examined in California again!

A. B. 1053, Gelder, a "Bohanon" amendment pure and simple; to license any one practicing a special branch.

A. B. 1054, Gelder, requires the state printer to print and offer for sale the Official Register and Directory of Physicians, the book that has been printed by the State Society for many years—at a loss! It would cost the state of California many thousands of dollars a year—for nothing!

A. B. 1274, Cram, prepared by the attorneys for the board and relates to the matter of filing a certificate in the county in which the physician practices.

A. B. 1275, Cram, also prepared by our attorneys, provides for raising the standards of preliminary education required so as to make osteopaths and all others have the same standard as now required of physicians.

A. B. 1276, Cram, also prepared by our attorneys, provides for a decent reciprocity on a basis of license issued after examination in some other state where the standards are not lower than those in California.

A. B. 1282, Shartel, provides for a special board to license practitioners of suggestive therapeutics!

A. B. 1483, Peairs, relates to advertising medical treatment and is a good bill, but the newspapers will kill it.

A. B. 1512, Ambrose, provides for two boards; a board of medical examiners and a board of examiners in drugless healing; it also lowers standards.

A. B. 1678, Southerland, provides for licensing without examination anyone holding a license in any state or territory prior to 1906 and would let is nearly every doctor in the country regardless of education or professional ability.

A. B. 1888, Johnstone, provides that physicians who have been in practice 15 years or more may, at the discretion of the board, be given a special examination, practical in its nature, and different from the examination given to others.

A. B. 1838, Gelder, is not an amendment but a perfectly new and wonderfully freaky law; it is so full of "jokers" that it is impossible to enumerate them all, but it would do all the destructive things that are provided for in Gelder's other separate bills, including the licensing of Bohanon.

It is to be noticed that every bill introduced, with the exception of the bills noted as prepared by our attorneys, has but one object in view—that is, *the admission to practice medicine in California of persons who could not obtain a license in this state under our present moderate requirements.* It is also to be noted that our present requirements are much lower than those of several other states.

There seems to be a mad desire on the part of

a large number of people to "take a whack" at the sick or afflicted and perhaps it would be a good thing to abolish the law entirely and let everyone treat anyone.

MEDICAL EDUCATION IN EUROPE.

The Carnegie Foundation's report upon Medical Education in the United States and Canada created much excitement, from east to west, because of the disclosures it made concerning the evil conditions of the many proprietary schools extant. Even the daily press became interested and occasionally it approved the report's attitude, but more commonly it came to the defense of some criticized school which had local favor. The Foundation's second volume on the subject of medical education treats of European conditions and its advent has created no stir. This is easily understood, for no local toes were trod upon. And yet this volume is the logical successor of the former and enhances that one's value, because of the great opportunity it gives for comparisons of objects and methods. It was, as is stated in the introduction, done at the request of American teachers of medicine in order that there might be an authoritative statement of European ideals, opportunities and efforts, for study by American schools for the direct purpose of bettering the latter. Therefore its publication should have been followed by careful comment by medical teachers themselves, and by the extra-academic, but no less real, medical teacher, the medical press.

The book demonstrates again the ability of the author, Abraham Flexner, to look at things with both microscopic and macroscopic vision, and his power to see detail does not impair his view of the subject as a whole but rather improves it, for his generalization is accurately based on the sum total of his itemization, and that makes it both interesting and valuable.

Opening with a resumé of the history of medicine for the past two hundred years it tells how medical education has followed and not led medical practice, and that only lately, when the science of medicine has gradually caught up to and then overtaken the art of medicine, has medical education been improved and to a certain extent standardized. This is perhaps less true of Germany than of other parts of the world, for it is only in Germany that medical education has been, from the beginning, a part of University work and as such it has partaken in the evolution of University activity. Elsewhere medical education has been in the hands of private individuals of varying ideals and abilities, and always it has been controlled by the treasurer's balance sheet of the end of a year, and nowhere has it been intelligently developed in accord with pedagogic principles and the full realization of the end to be attained.

Written with the standards and ideas of to-day in mind, the story of the gradual establishment of the scientific viewpoint is instructive, and that not only to the medical teacher, but to anyone interested in education at large. Therefore this

latter volume has an intrinsic value of its own from a purely pedagogic point of view.

Before beginning the discussion of medical education proper, the book contains a most important chapter—perhaps the most important chapter—on the basis of medical education, which is the preliminary training gotten in the secondary schools. Granting at once that there is not time in the years allotted to the study of medicine itself for the acquiring of all the knowledge essential to the scientific practice of the art of medicine, attention is at once turned to the secondary school to prepare the student for the successful study of medicine. Reviewing the conditions under which a man can enroll himself as a medical student in Germany, it is curious to be told that the same confusion exists there as elsewhere; for while the humanistic Gymnasium, with its sturdy adherence to the classics, has had lately two competitors in the Realgymnasium and the Higher Realschule, which eliminate one or both of the ancient languages, substituting for them modern languages and science, still the Gymnasium students can enter upon the study of medicine on the same legal terms as those of the other schools. So that at the very beginning a confusion of ideas if not of tongues is inevitable and presumably persistent. In England, in spite of there being no definite scheme, "a minimum preliminary standard gradually acquiring the force of law has been set up in indirect fashion," while "in Scotland the situation is distinctly more orderly" a joint board controlling all work preliminary to university entrance. On the continent again, in France, the government controlled educational scheme demands that "a baccalaureate course of secondary instruction plus a certificate covering the study of physics, chemistry and biology issued by the faculty of science constitute the basis of medical education." Whoever has had the interest to follow the efforts of those in this country who are responsible for medical education knows that the first obstacle to the establishment of an adequate course of study is the great variation in the preparation of the applicants, and attention was at once turned to the secondary school as the place where the needed improvement should begin. Mr. Flexner very properly treats the subject at the length which its importance merits; and in the same way, in a succeeding chapter, he emphasizes the need of the study of the basic sciences, physics, chemistry and biology, "for the medical sciences are experimental, not merely descriptive, and while even in their descriptive form they cannot be understood without a knowledge of the basic sciences, intelligent experimental study is out of the question to a student who lacks practical skill, brought over from the basic sciences."

The teaching of medicine is described under the headings of the Medical Sciences; Clinical Instruction; Curriculum and Examination; all in Germany, France and Great Britain. The subjects are done fully and explicitly with ample discussion and free quotations from teachers in all three localities; and out of the discussion it is

possible to construct the ideal of the subject which has developed in the mind of the author. So that the book has, in a measure, at once answered its purpose, for it gives one man's opinion of a model medical course. It shows, too, the great advantage of having a national ideal, for in Germany not all of the universities have enough means and often a civic hospital is officered with university men and made thus to contribute to university work, or a civic hospital appointee is given a university appointment for his term of office, and so again university work is fostered, and this without the anomalous condition witnessed in this country, where we see the state's university obliged to compete with private corporations for a proper share of the state's and cities' medical opportunities. The possession of an ideal and of university methods is shown to be the great attraction which German schools have over others for medical students, that and the other fact, that German medical teachers are primarily teachers, not primarily practitioners, and that, as teaching is their "major subject," they are earnest and zealous—they are, in fact, teachers who teach, and to such teachers students will always flock. Moreover, the point is especially made that this German plan is not rigid, but is adequately elastic so that individual effort need never be lost, but has always opportunity to develop along lines of especial interest or ability. Covering the subject as exemplified at all the great schools in all three countries, the book may be a guide book for one choosing a school for some particular line of work, for in it he can find ample information about plant and officers and terms of study in didactic, clinical, laboratory or experimental ways.

Two chapters of other value follow these of technical consideration, one on the Financial Aspects of Medical Education, showing that here, too, money is the great common denominator and all effort must be reduced to terms of finance; and another chapter on Sects and Quacks. Practically Homeopathy is the only sect, and it is shown to be, in its diminishing numbers, a wholly negligible matter. The frank quack, however, is not a negligible quantity, certainly not in Germany, and the unparalleled development of pure quackery, which has in this orderly country to register itself as quackery, is astounding. Finally, the opportunities for postgraduate instruction are set forth and the medical education of women has a chapter, but it is chiefly historical and statistical, relating the conditions of study of the small handful of women medical students and practitioners in Europe.

Just as an introduction to a book is written last, so the introduction to this book may be referred to last, but it is by no means least. President Pritchett wrote it, and it forecasts all the points made in the body of the book, like the opening orchestral music of an opera. It does more than this, it puts some certain truths in unmistakable form, and especially shows that the medical profession is what the people make it, not what the physicians make it; and that the laity, in its utter indifference to the education and training of its family physician, and its easy tolerance of mediocrity and ignorance

and even its eager embrace of the faddist, the charlatan and the quack, not only says that it does not want the well educated and highly trained man, but makes it impossible often for a man to become well educated and highly trained. This introduction should be read by every father and mother in the country, and especially by the particular fathers whom the fathers and mothers of any state may send to that state's legislature, to set forth the laws which shall regulate the qualifications of the physicians who shall treat their sons and their daughters.

H. M. S.

THE EDUCATIONAL VALUE OF MOVING PICTURES.

Since 1910 it has not been an uncommon event at European scientific congresses to witness a display of moving pictures illustrative of physiological phenomena and the life of microscopic human parasites. In this country, with the exception of a few demonstrations made in the East, little attention has been paid to the subject by universities and medical societies.

Some years ago a Parisian surgeon earned the distinction of being the first, the writer believes, to employ moving pictures in medicine or surgery. This record of an operation on a world-famous subject was later shown to the public, against his will said the surgeon, who won a suit for damages against the film manufacturers after he had been severely criticized by his confreres. (It has never been proven that this remarkable surgeon was a silent partner of the manufacturers.) This same man showed various films at Edinburgh whose University conferred the LL. D. upon him in recognition of the value of his services.

T. W. Weisenburg of Philadelphia (J. A. M. A., Dec. 28, 1912) in an article entitled "Moving Picture Illustrations in Medicine," draws the attention of the profession to this advance of contemporary science as applied to medicine. All of his work has been with the nervous or insane, the various gaits, tics and convulsions lending themselves particularly well to motion photography. The importance of such cinematographic records for teaching purposes cannot be overestimated, and while Weisenburg naturally does not claim that film demonstrations are preferable to demonstrations of patients, he has found that the former will frequently interest students more than the latter. Of great value is the possibility of fine analyses of movements, e. g. of a rapidly occurring convulsion when the original is reproduced greatly enlarged and when the speed of the film can be regulated at will.

Quite recently, thanks to Dr. W. Tait, physicians and university students in the Bay Counties enjoyed the opportunity of witnessing the great educational possibilities in this field. The films were from the firm of Graumont and were made in various Parisian laboratories. Subjects demonstrated were, 1, the contractions of the frog's heart; 2, circulation in arteries, veins and capillaries of a rabbit; 3, study of the blood and blood dust under the ultra microscope; 4, a series of experiments on peristalsis by the method of perfusion; 5, various

forms of intestinal parasites; 6, study of spirochaetes; 7, demonstration of agglutination of spirilla in the blood of the chicken; 8, study of dental tartar under the dark field illumination; 9, study of water under the ultra microscope.

There is no doubt that in the future motion pictures are destined to play an important role in the education of the medical student just as they are to-day playing a tremendous role in the education of the public. The so-called "Nickelodeon," which as a result of the increase in the cost of living may soon be re-christened "Dimodeon," has certainly done a great deal in the teaching of history, of geography, or art, many of the lessons being easily swallowed and well assimilated in this gelatin-film coated form, whereas these same lessons might not have been at all digested if presented even on a series of so-called lantern slides.

The repetition by medical students of physiological experiments, necessitating the sacrifice of thousands of animals yearly, bitterly antagonizing the so-called antivivisectionists, will surely be rendered far less common so soon as the use of motion pictures becomes generalized.

The Edison Company has recently sent out a prospectus announcing the production of a small inexpensive moving picture machine, with small sized films, and recommended its adoption by universities and medical societies. The very serious objection to the adoption of this small machine is that it cannot be used for the demonstration of *standard sized films*, such as are being made by numerous manufacturers in this country and abroad. Any departure from a standard gauge would seem to be just as much a mistake with a moving picture apparatus as with a modern microscope. Several workers in this State are at present perfecting a portable machine, overcoming this objectionable feature, and with the marketing of a perfected machine in the near future we may expect to see a marked development in the use of moving pictures in medicine.

R. B.

ORIGINAL ARTICLES

SUCCESSFUL REMOVAL OF AN INTRADURAL TUMOR FROM THE SPINAL CANAL.*

By L. NEWMARK, M. D., and HARRY M. SHERMAN, M. D., San Francisco.

Medical part by L. Newmark, M. D.

When Mrs. R., aged 45 years, was first seen by me July 12, 1911, her right lower extremity was so weak that she walked with great difficulty, even when supported. Power in the left lower extremity was not appreciably reduced. On both sides an extensor Babinski reflex, patellar and ankle clonus could be elicited, and in both lower limbs and on the trunk sensibility was diminished. Urination, she said, was a trifle slow. She denied having pain in the back or anywhere else.

It was learned that the condition thus summarily described had developed *gradually*. In July, 1910, the patient first felt a burning in the left lower

* Read before the San Francisco County Medical Society, January, 1913.

extremity and she still felt "as if there were a large scratch there." From Dr. Clark Burnham and Dr. H. C. Moffitt, who had first examined her in September, 1910, the information was obtained that she had been weak in the legs for about ten months and that she had presented the Brown-Séquard combination of symptoms—motor disturbance in the right leg and sensory in the left.

Obviously there was a progressive obstacle to conduction in the spinal cord. As will be seen, there was tenderness to pressure in some of the spinous processes, but no indication of a tuberculous or other disease in the spinal column itself. Compression of the cord by a tumor seemed more probable. The absence of pain, however, although by no means an insuperable objection to this diagnosis, was nevertheless enough to make us pause a little, and in the laboratory my predecessors in the case had encountered another stumbling-block in the shape of a positive Wassermann reaction in the blood serum.

As I have set forth elsewhere,¹ a recent experience had made me disinclined to acquiesce implicitly in the decision of that test even after it had been corroborated by another positive reaction in the spinal fluid which I withdrew a few days later. At all events, whether syphilitic or not, the disease had resisted much and various specific treatment, and consequently a surgical operation was clearly indicated, so that the problem became one of localization of the lesion. Still, out of deference to the Wassermann test, specific treatment was continued during the time required for repeated examinations of the patient and for observing the development of the symptoms.

In the absence of root symptoms, the level of the lesion had to be inferred from the uppermost determinable extension of the anesthesia, due allowance being made for the common discrepancies between the level indicated by the anesthesia and the actual site of the lesion.

At the first examination on July 12 it was the perception of cold and heat that was most disturbed in the lower extremities, while sensibility to touch and pin pricks seemed but slightly affected, if at all; but two days later there was a decided hypalgesia throughout both lower extremities, while the recognition of tactile and thermic stimuli was but little impaired. From the first examination on I was struck by the impairment of sensibility on the anterior surface of the right thigh being deeper than on the right leg or anywhere else. This local excess of anesthesia aroused misgivings as to the focal nature of the disease, and made us occasionally consider the possibility of some complication; but these doubts were not justified by the event.

Stroking the sole of the *left* foot caused a keener sensation than that of the right and the resulting reflex contraction was livelier on the left than on the right. The abdominal reflexes were absent now and subsequently.

When delicate touches with cotton wool were applied to the skin of the trunk, proceeding from above downward, on both days they were announced to be less keenly felt at the level of the eighth spinous process, and the line of transition

to comparative tactile dullness went straight around the body. And the eighth spinous process appeared distinctly tender to pressure, as did in a lesser degree the neighboring spines. But we were far from utilizing these first findings for the purpose of localization.

On July 18 lumbar puncture was performed. The pressure of the fluid was low. About 6 cc. was withdrawn. The sequel, no doubt an effect, of the puncture, was startling; for at the next visit it was found that the paresis of the right lower extremity had become an almost total paralysis, the only power persisting in it being that of slight extension of the leg when the thigh was passively flexed; and it was learned that the change had occurred on the day of the puncture. The eighth spinous process had become much more tender and the patient now complained so much of pain in the region of this dorsal process going through the body that she required morphine once a day. The sixth and seventh processes had also become tender, but the eighth was the worst.

On July 30 the sixth process was found to be the most tender to manipulation; two weeks later the fifth surpassed it in this respect and the fourth was also somewhat sensitive. When the patient inclined her head she said that she felt pain in the back at a point determined to be the fifth dorsal process, and from here the pain went through into the chest and followed the ribs around the thorax.

Soon after the lumbar puncture the right thigh drew up towards the abdomen and the patient was utterly unable to extend it; this flexion at the hip persisted for three weeks and then disappeared, leaving the whole limb flaccid and totally paralyzed, with the exaggerated reflexes as observed in the beginning. By the latter part of August the left lower extremity showed a very slight tendency to loss of power, weakness appearing in abduction of the left foot. Urination had become a little more difficult.

At this time there was more or less diminution of sensibility to tactile, cold, warm, and painful stimuli on both sides of the trunk and in both lower extremities. The highest level at which we could determine a change of sensibility of any kind was, in front, that of the junction of the manubrium of the sternum and the ensiform process, where a dullness in the perception of cold existed, and in the back that of the fifth dorsal spinous process to which a reduced sensibility to thermic and painful stimuli could be traced. On some days tactile perception also was found lessened as far upward as the fifth spinous process, on other days its lessening began at a lower level.

The hypesthesia in front corresponded to the sixth dorsal segment, that in the back to about the fourth, according to Seiffer's diagrams.

The fourth segment is opposite the base of the third dorsal process, but the common experience that tumors are sought too low gave reason for believing that the compression in this case might be even higher. On the other hand, from the behavior of the cerebrospinal fluid at the lumbar puncture it was inferred that there was a

damming up of the fluid above the point of compression and it was thought possible that the accumulated fluid above a tumor might cause a pressure upon the cord at a higher level than that of the tumor itself. It was to a tighter jamming of the tumor in consequence of the withdrawal of the fluid below it that we attributed the loss of the remaining power in the right lower extremity after the lumbar puncture. So, by limiting the opening of the spinal canal too strictly in accordance with reasoning upon the anesthesia there seemed to be some slight danger of looking too high for the tumor.² Furthermore the great tenderness of the fifth spinous process seemed to appeal for some consideration, although we bore in mind that other spinous processes had at various times held our attention. There was little likelihood of overlooking a tumor if the opening was extended from the fifth to the second process. Accordingly the operator was requested to begin his incision over the fifth spinous process, although the conviction was quite firm that the tumor would be found at a considerably higher level. It was found under the second dorsal arch, on the right side of the cord.³

The operation was performed on the 31st of August, 1911. On the next morning the patient announced that she had recovered some power of motion in the right ankle and on September 2 we convinced ourselves that she could move the right foot quite freely. A few days later it was found that the power to abduct the left foot had been restored. By September 9, the Babinski sign in the left foot had become modified inasmuch as it could now be provoked only from the heel, whereas irritation of other parts of the sole produced a flexor response; two weeks after the operation, by very careful manipulation a slight tendency to the extensor response could still be detected there, but in the right foot the Babinski sign remained fully developed and it persisted for a considerable time longer. Sensibility had improved very much in the left extremity within two weeks after the operation, and also in the right leg, but in a less degree; but on the anterior surface of the right thigh there was still a pronounced anesthesia on September 15. On October 20, however, a careful survey by Dr. Beerman disclosed normal sensibility everywhere.

In December, 1911, the patient had preserved a slight limp from the tendency of the right foot to turn inward, but there is now a complete restoration of all functions.

A few points deserve a little additional attention:

1. The effect of the lumbar puncture. The only mention of a similar occurrence known to me is in the report of a case of tumor compressing the cord by Raven,⁴ where it is related that "the next evening" after a lumbar puncture a sudden aggravation of the paralysis and anesthesia took place. One is reminded of the evil consequences of lumbar puncture in some cases of tumor of the brain and of the fatalities especially to be apprehended from it when the growth is situated in

the cerebellum. A general warning against so useful a procedure in cases of tumor affecting the cord would hardly be justified by this very limited unfavorable experience.

2. The upward movement of the spinal tenderness and the anesthesia. When the level of the compression is to be ascertained, in the absence of root symptoms, from the uppermost extent of the anesthesia it is well to bear such a tendency in mind, particularly in an early period of the disease, when the compression is slight; otherwise the tumor will be sought too low. In a case of Köster's⁵ there was at first tenderness of the eighth, ninth, and tenth dorsal processes, a month later of the fifth, and in a couple of months more it was most pronounced in the fourth; there was also a gradual ascent of the anesthesia; the tumor was found under the third dorsal process. Well-marked tenderness is suggestive and luring, when it is first observed, but in the course of the disease it is likely to shift and seems to be very misleading.

3. The result of the Wassermann reaction. Despite the overwhelming evidence in support of the value of this method for the detection of syphilis it does not seem superfluous to again advert to the errors into which we may occasionally be led by it. The publication of my experience in this case and in another one in the *Journal of the American Medical Association* immediately brought me a letter from Chicago, in which the writer related that in one case a positive Wassermann reaction had caused a disease of the tongue to be treated specifically until carcinomatous metastases appeared and deprived the patient of whatever chance a surgical operation might have offered, and that in another a cranial operation was allowed to proceed despite a positive reaction and revealed a glioma. Last year, induced by repeated reports of a positive reaction I persisted unduly with anti-syphilitic treatment of a boy who presented the symptoms of disease in the foot center of the brain, until finding my efforts unavailing I sent him to Dr. Harvey Cushing for operation and learned that the disease was an endothelioma. Some there are who consider the test sufficient warrant for assuming that in all these cases a latent syphilis was revealed co-existing with the other disease; others towering in the confidence of superior technic may impugn the competence of my collaborators. But it appears from recent German literature⁶ that there is experimental evidence as well as clinical testimony to show that when organs which contain an abundance of lipoids are destroyed by a non-syphilitic disease the Wassermann reaction may be positive. At all events, it does not seem to me to be presumptuous to advise that, when a tumor of the central nervous system is probable, confidence in the Wassermann method be tempered by remembrance of human fallibility in matters even less complicated.

Surgical part by H. M. Sherman.

My preoperative duties in the case of Mrs. R. consisted in carefully going over the details of

the history and his physical findings with Dr. Newmark. Concurrence with his opinion was inevitable and I took charge of the patient for the operation which was done on the 31st of August.

I followed, as nearly as I might, the technic of Cushing. This includes an incision directly upon the tips of the spinous processes. Each tip is then bitten off with a rongeur—the periosteum is next stripped from the side of each process, and incisions are made, from process to process, exactly in the mesial plane separating the muscular layers of the two sides. The processes are then cut off close to the laminae. The hemorrhage has been insignificant, and the necessity of hot sponge packing to check the bleeding from the spinal veins is wholly avoided. The spinal canal is then opened by a large Doyen burr which cuts out the cancellous tissue of the spinal arch at the point where the laminae and the spinous process meet, and then cuts the cortex of the laminae on their deeper side just as the tabula vitrea is cut in opening the skull. The rest of the laminae are then cleared of the periosteum on their superficial aspect and the bone is rongeur away from the periosteum on the deeper surface. An incision through the soft tissues which are left, made exactly in the midline, exposes the peridural fat and the dura mater.

I began, in the way, mentioned on the fifth dorsal vertebra, then I took the sixth and then the fourth. The exposed thecas could be felt as rather lax, surely not tense, and as there was nothing abnormal to be seen or felt, it was decided to take off the third lamina before opening the dura. There was no pulsation noticed through the dura and when it was opened the cerebro-spinal fluid was seen to be very scanty and the cord was not pulsating. A probe passed up and down the canal outside the dura encountered no obstacle. At Dr. Newmark's request I removed the lamina of the second vertebra and in extending the incision in the dura up across this space I encountered a little bony plaque 7 to 8 mm. long and 3 to 4 mm. wide. It was quite firmly adherent to the dura and I dissected it loose, thinking it represented a tumor. Under it I found a tumor mass, adherent to the dura and pressing on the cord. It was soft and tore easily, but I succeeded in pulling it out between the third and fourth nerve roots from its location in front of the cord. As it came out a gush of cerebrospinal fluid followed, evidencing the existence of exactly the conditions Dr. Newmark had supposed from the symptoms complex. To entirely separate the tumor I had to clip out a portion of the dura mater to which it was adherent and in closing the dura I was obliged to leave this gap open as I did another gap, a little cephalad, where was clipped out another bony plaque.

The wound was closed by tiers of sutures approximating the parts anatomically and there was normal healing.

Recovery was uneventful except for pain. This

was severe, at first steady and exhausting, then spasmodic, especially started by any movement; later it was erratic and irregular—once described as a twitching feeling all through the back and chest. Pain was the only complaint with which I had to deal. Dr. Newmark has recorded the restoration of function in the cord as shown by the recovery from the paralysis and the return of sensation. On the 29th of September, twenty-nine days after the operation, I had her stand up and walk, and from that time her recovery was rapid to completion.

In the case of a woman with a spinal cord tumor upon whom I operated, which was reported to this society by Dr. Herbert C. Moffitt the patient walked first upon the thirty-first day. Both of these women are now perfectly well in cord functions as in others.

Of the tumor Professor Ophuls reported that "Sections show tissue made up of large spindle cells, in which there are many calcified concentric granules," and he added the diagnosis "Psammoma of the dura mater."

In both of these cases the tumors have had relations to the dura mater, the former was stuck to the dura, but could be easily scraped off—the latter was more closely united and the dura had to be cut away to free the tumor. Pathologically this obeys the rule of intradural extra-medullary tumors.

In looking up some other case reports I found that George P. Muller of Philadelphia, a year ago, had quoted Starr's 1895 list of 123 cases, in twenty-two of which operation was done with a mortality of 50% and but six recoveries. Muller adds cases reported by Collins, Oppenheim, Bailey and Hunt and Woolsey, Moffitt and Sherman and himself; in all 116 cases, in which 76 operations were done with the recovery of 35 from the effects of the tumor. This is in keeping with Oppenheim's statement, also quoted by Muller, that recovery may be attained in about 50% of cases "Presenting a typical clinical picture of extra medullary growth."

Muller comments on the risk of the operation per se and quotes Krause's eight deaths in twenty-six operations.

Recently Coley has discussed the operative risks of laminectomy. It has come to me to do the operation a good many times and in all parts of the canal. I have taken off the sixth, fifth and fourth and third cervical laminae, and we could then look up into the skull and see the lower surface of the cerebellum. I have operated many times for pressure paraplegia in the dorsal region as well as for cord crushes in both cervical and dorsal and I have exposed the whole of the lumbar enlargement. One of my patients who was moribund, died on the operating table. All of the others have made good operative recoveries, though few have had the good fortune which has come to these two women with the intradural tumors. As my operative ability and technic is in no way extraordinary, I think I must class the operation as one in which the cutting can be

limited to connective tissues and in which therefore the operative risk itself is slight.

1 "The Occurrence of a Positive Wassermann Reaction in Two Cases of Non-Specific Tumor of the Central Nervous System." *Journal of the American Medical Association*, January 6, 1912.

2 See a statement by Nonne in the *Neurologisches Centralblatt*, 1908, p. 751.

3 According to the diagram of Dejerine and Thomas, the second arch corresponds to the fourth dorsal segment; according to Gowers' diagram, it corresponds to the third.

4 Raven. *Deutsche Zeitschrift für Nervenheilkunde*, Vol. 44, p. 386.

5 *Neurologisches Centralblatt*, 1907, p. 520.

6 Bittorf and Schildorsky, *Experimentelle Untersuchungen über das Wesen der Wassermann'schen Reaktion*, *Berliner Klinische Wochenschrift*, 1912, No. 42.

THE VARIATIONS OF THE CLINICAL PICTURE OF MENINGEAL AFFECTION IN PULMONARY TUBERCULOSIS IN ADULTS. WITH CASE REPORTS.

By J. L. POMEROY, M. D., Monrovia.

Whenever a case of pulmonary tuberculosis begins to show symptoms of meningeal irritation, the diagnosis of tubercular complication is generally predicted. No doubt this is as a rule correct; occasionally, however, one finds little at autopsy to verify such a diagnosis. The following case illustrates these statements and on that account should possess some interest.

The patient, G. V., male, age 30 years, had been suffering from pulmonary tuberculosis for three years, and at the time when first seen was in an "arrested" condition, doing a small amount of work, daily. One sister had died from tubercular meningitis, as a complication of pulmonary disease. No other facts of importance in the family history. The symptoms from which he demanded medical care came on suddenly. The patient was working in his garden when he began to suffer from intense frontal headache. This continued for several days when he began to vomit. At this time he presented the following: Patient was a large, well-formed, muscular man, slightly under weight, face flushed, pupils small, equal in size and sluggish in reaction to light and accommodation. There was no tenderness over the head, no rigidity of neck muscles, no history of syphilis, middle ear or sinus disease. Hearing and other senses normal. Mind perfectly clear. The knee jerks were absent and only a faint ankle jerk could be obtained. No changes in sensation. The pulse was slow (60 per minute), full and regular. Temperature 101° (10 a. m.). There was diffuse infiltration throughout entire right upper lobe with small cavity at apex. The lower lobe and middle lobe showed only slight thickening. There were few rales throughout these areas. The left upper showed signs of old fibroid condition with diminished resonance, and harsh breathing throughout with scattered fine rales. The right border of the heart was found about 1½ inches to the right of the sternum, apex normal, no murmurs. There was a slight amount of muco-purulent expectoration in which there were abundant tubercle bacilli. The abdomen was slightly retracted, no tenderness, stomach borders normal, no tumor or other pathological findings.

The headache was continuous, boring in character and located mostly in the frontal regions. The bowels were very constive. The patient retained but little food upon the stomach. The vomiting was almost "projectile" but not altogether so.

The patient was placed in a hospital under close

observation, the 3rd day of his illness. The temperature varied from 97.2° f. in a. m. to about 101° f. p. m., pulse remained from 60 to 70 per minute. The bowels persistently refused to move even after large doses of salts, calomel, etc. Recourse was had to high colon flushings three times daily. Finally after three minims of croton oil in divided doses evacuation was secured. Morphine and chloral in large doses were the only drugs which seemed to relieve the headache.

The patient gradually became more and more restless and needed careful watching. Nevertheless his mind remained clear until shortly before death. Lumbar puncture was performed on the fourth day of observation with the following results: The fluid flowed under considerable pressure, 15cc. was withdrawn; it was clear and limpid; albumen slightly increased, no polynuclear cells, but a slight increase in lymphocytes 16-20 per cu. mm., injection of fluid in peritoneal cavity of guinea pig gave positive results for tubercle bacilli. Ophthalmoscopic examination of eyes showed marked "choked disc" in both eyes.

After the lumbar puncture the patient's symptoms slightly improved; for two days he was able to take nourishment, and the headaches became less severe. Soon, however, they returned with greater intensity. Repetition of the puncture was refused. The neck muscles showed slight rigidity, the patient became unable to name objects presented to him, although he apparently understood what they were (paraphasia), was conscious of his surroundings. The knee jerks remained absent, the ankle jerk was slightly increased, and there was an uncertain Babinski. There was never any paralysis. Kernig's sign became positive only a few days before death. His speech gradually became jumbled, although it was quite apparent that he knew what he wanted to say. The sphincter control was never lost or disturbed.

Urinalysis was entirely normal. The blood count showed only a moderate leukocytosis, the differential count was as follows: lymphocytes 25%, large mononuclears 5%, eosinophiles .5%, polynuclears 72.5. Total W. B. C. 10,000. No changes of note in the red cells. Hemoglobin Sahli 65%.

The patient gradually sank into coma, the lungs filled, became edematous, and death occurred nine days after onset of the symptoms. A brief abstract of the post mortem findings follows.

On removing the skull cap the dura was densely adherent, the veins much dilated and markedly congested. The brain seemed to be markedly tense. There were slight fine adhesions over the entire cortex, and the pia showed marked edema and in places over the cerebrum fine thickenings and opacities. Nowhere were tubercles to be found. On sectioning of the brain the right ventricle was much dilated with fluid, but no other gross pathological changes were noted. The convolutions were everywhere well formed, and well developed. Microscopical examination of sections taken from the membranes and various regions of the brain, showed only slight pial infiltration and perivascular infiltration and thickening. There were present definite acute inflammatory changes but no areas of necrosis were to be demonstrated.

There were dense adhesive changes between the parietal and visceral pleura over both apices. The right lung showed multiple foci of tubercular infiltration throughout the entire upper lobe. The lesions on the whole were fairly well encapsulated. Scattered foci also appeared through the middle and lower lobes. The left upper lobe was also infiltrated throughout with scattered areas of fairly normal lung tissue. The lower left lobe was relatively clear. The bronchial glands were partly caseous and softened. Nothing of note was observed in the heart, liver and remaining organs.

Autopsy summary. Chronic pulmonary tuber-

culosis; edema of brain, with mild degree of acute inflammatory changes in the pia and cortical substance.

The interesting features from a clinical standpoint are: the sudden acute onset, the absence of very definite neurological signs of meningitis, knee jerks absent, late appearance of a Kernig's, prolonged clearness of the mind, late appearance of stiffness in the neck, as well as the occurrence of choked disc, slow pulse and complete absence of convulsions, paralysis, twitchings, photophobia and other usual signs of meningeal irritations. The pathological signs while slight in nature are enough to warrant the diagnosis of a mild meningo-encephalitis, due to the tubercular toxemia, but without actual tubercle formation.

That this mode of death in pulmonary tuberculosis in adults, certainly is not rare stands to reason in that I have observed three other cases develop suddenly typical symptoms of meningitis. The mode of onset, however, is particularly striking in these cases; it came on almost like an "eclampsia." The patients were all doing well, and supposedly in no danger. In one instance in a young girl of 18 years, the onset was with "hysterical" fits with marked emotional disturbance, there was a phantom tumor in the abdomen, the patient seemed dazed and unable to speak. Rapidly the picture cleared and the classical symptoms of meningitis asserted themselves. In another case, following a trivial quarrel with his sweetheart, a young man of 23 began to complain of severe headache, in 24 hours he was comatose, and in three days died with all the symptoms of meningitis. Many cases of tubercular meningitis can be traced to chronic middle ear disease but this factor did not exist in these cases. In another instance a young man of 21 years of age with a pneumonic type of phthisis began to show numbness of the finger ends and twitching of the index and middle fingers; in four days he was dead, having rapidly developed symptoms of meningitis.

In other cases there is a more chronic course with gradual progress, and in which the diagnosis from tubercular tumors is almost impossible. I observed one such case which at autopsy showed a solitary tubercle in the left optic thalamus.

It has long been known that one may get symptoms of meningitis in acute infectious fevers without very definite anatomical changes in the brain or membranes. Quincke is responsible for the statement that certain infectious diseases such as typhus, scarlatina, pneumonia and many febrile diseases cause a high pressure in the spinal fluid and sometimes increase the cellular content. In many cases the only theory available is the one of chemical toxin irritation. The French school have long held that the presence of lymphocytes in increased amounts in the spinal fluid indicates always meningeal irritation. Syphilis in any of its stages may cause spinal lymphocytosis and it is commonly found in paresis and locomotor ataxia. Noguchi's reaction should aid in differentiation

between the syphilitic and non-syphilitic causes in explaining spinal lymphocytosis.

In a review of the literature up to 1904 Jessen quotes Schultze who made many observations showing that cases clinically showing symptoms of meningitis, anatomically gave no clue to their origin. Armand-Delille also claimed that the tubercular toxin could cause meningeal symptoms. Krannhols observed similar cases. In adults Kamboseff found tuberculous meningitis in only 2% of the cases. Kraemer in 477 tuberculosis cases found pial tuberculosis in 9.2%; in these, however, only one occurred in connection with phthisis. Therefore, Jessen states that tubercular meningitis develops very seldom in adults.

In a series of over 150 lumbar punctures done from a diagnostic standpoint, upon various nervous diseases reported in the *Journal of Nervous and Mental Diseases*, May, 1907, I observed several cases which showed an increase in lymphocytes in the spinal fluid, while at autopsy only very slight inflammatory changes were to be found microscopically. There is a point here to be remembered; if a patient who presents himself with symptoms of supposedly meningeal or cerebral origin has previously had syphilis, this alone will account for the lymphocytosis. Therefore from the presence of lymphocytosis alone we must not make a diagnosis of meningitis.

The exact source of infection of the meninges or brain in pulmonary tuberculosis seems to be uncertain. It may originate from the bronchial glands, but also direct from the lungs. Kraemer states that it may originate from the bronchial glands, joint tuberculosis, tubercular cervical glands, and also lung tuberculosis. Jessen states that tuberculous infection of the pia was first described by Von Dance in 1829. Buhl in 1859, before the discovery of the tubercle bacillus, thought that meningitis originated by the entrance into the blood of tubercular material. From the recent work we now know that tubercle bacilli frequently are to be found in the blood of pulmonary cases. The brain tissue in adults, however, seems to possess some inherent chemical resistance to invasion, as it seems to be but rarely attacked. Possibly the slow circulation, the presence of large amounts of blood, and the peculiar chemical consistency of brain tissue, containing as it does lecithin, etc., are directly destructive to tubercle bacilli. Experimental researches in part support this idea. But we can not explain the difference in the susceptibility of the meninges in adults and children, except possibly on the grounds of developmental differences.

Kraemer in his material twice observed tuberculosis of the pulmonary veins. Oppenheim held that the infectious material gains entrance to the circulation through the pulmonary veins. Possibly the infection results from an infectious embolus. Strüpel states that the bacilli may travel through the lymph channels of the nerves to the arachnoidal sac of the cord and from there to the base of the brain. Leube felt satisfied that in one such case the mechanism of infection was upon

this basis. Peron concluded from his researches that the spread of the infection came through the cerebrospinal fluid. Possibly the bacilli passed from the lymph channels in the brain and tissues directly into the cerebrospinal fluid. The frequent presence of tubercle bacilli certainly show that they are present in such conditions but whether they pass into the fluid primarily to the formation of a localized lesion, or the lesion arises on the basis of their presence so far as one knows has not been solved.

Armand-Delille produced experimentally by ether and chloroform extracts of tuberculous material symptoms from the central nervous system, but only in a mechanical way hyperemia and leukocytic infiltration of the meninges. He never found a primary encephalitis, but only secondary symptoms from infiltration of the meninges.

O. Fischer analyzed 260 undoubted cases of tuberculous meningitis from the Leipsic Clinic. Fifty-seven cases occurred in patients over forty years of age; from forty to fifty years, eighteen cases. Most of the cases were of the basilar type, only in one-eighth of the cases was there inflammation of the convexity. Urine retention was a common symptom; rigidity of the neck muscles was common but not constant. The average duration was five to fourteen days, the longest seven months. None showed healing. Twenty-five lumbar punctures showed twenty-two times a plain lymphocytosis, only once were tubercle bacilli found. Two cases in the report are of unusual interest. A man in the last stages of heart disease was brought to the hospital "in extremis" and died of heart failure. There were no meningeal symptoms but necropsy showed a severe tuberculous meningitis. The other case was that of a man of forty-four years, with all the text-book symptoms of the disease including the "hydrocephalic cry"; at the necropsy there was advanced pulmonary and intestinal tuberculosis but no lesion whatever in the brain.

The disease seldom localizes itself upon the cerebral pia. Kraemer in forty-four cases found this condition only once. Seitz in fifty cases only once, Huebner in twenty-nine cases only once found meningitis of the cerebral area. One frequently finds a secondary infection of the brain substance and also of the pia spinalis. The inflammation of the pia spinalis is commonly found in connection with basilar meningitis.

Tubercle in the cerebral pia may follow direct trauma to the skull. Buol and Paulus describe such a case. A young man of twenty-eight who had recovered from an apical infiltration and had remained well for a year and a half had a fall in which he struck his head severely. In fourteen days he died of tubercular meningitis. At autopsy two small tuberculous masses were found in the central area of the convexity of the brain which were old and apparently healed, from these spread over the pia, generalized inflammation.

Vosnessensky reports a somewhat similar case in which operative treatment was attempted. A man of forty-five, some five years after a blow on

the head, developed convulsions in the limbs on the left side, coming on at variable intervals. For four months previous, these crises occurred three times a day, and the muscles of the left wrist had been paralyzed for a month. Acute parietal headache had persisted for a month and difficulty in articulation for three days. Babinski was absent, there were no disorders in sensation, no disturbance of the pupils, though there was optic neuritis. After a few days the patient became comatose, with slow pulse, vomiting and dilatation of the pupils. Operation was performed over the right motor area, the dura was thickened and yellowish, adherent to the brain, and palpation disclosed a hard nodule. After incision of the cortex a firm yellowish mass two by one and three-fifths inches was removed. This was partly in the cortex and partly in the white matter. Death occurred the next day. Necropsy showed the growth to have been completely removed, there was no other in the body. Examination showed it to be a tuberculoma. Operations on such growths are still uncommon. Duret was able to collect but twenty-two on the cerebrum with nineteen cures and eleven on the cerebellum with nine deaths.

Psychic trauma or psychic excitement from varying causation seems also to be a predisposing factor in the production of tubercular meningitis. Continual worry, fatigue, the nervous constitution are mentioned by some authorities as predisposing causes. Zappert reports cases of hemiplegia, of tuberculous origin, due to a lesion in the internal capsule or over the convexity. Warfvinge reports cases of miliary tuberculosis with tubercles spread over the entire convexity, with marked exudate and pial thickening. The symptoms began with choreiform movements of right arm, leg and face, later the left side shows irritative symptoms.

Weintraud describes a case of meningitis of the convexity of the brain in a man of thirty-three with pulmonary tuberculosis. In this case he found also an endarteritis obliterans and thrombosis of the smaller vessels of the pia of tubercular origin.

Distinct motor symptoms may result from meningeal thickening over the motor centers. Matthes describes a case of meningitis in tuberculosis of the lungs, with paralysis of the hypoglossal nerve; at autopsy only meningeal thickening over the cortex, while the nucleus and nerve trunk were normal.

In general the prognosis of these cases is bad. Seldom does recovery ensue. Jirasek reports an instance of recovery, but such cases bring up the question that the disturbance may have been only toxic in origin. I have seen recovery ensue in the following case:

A young girl of 18 with severe destruction of the upper left lobe of the lung, developed rigidity of the neck muscles, weakness in the left arm and marked atrophy resulted in the muscles of the left forearm. The notes of the case are as follows:

Patient has been febrile (100°) daily and in bed some time. First began to suffer from rheumatic pains about the hips, both sciatic nerves tender to pressure, no loss of power in legs. Has

suffered from stiffness of the neck for several months; more on the left side. Would go away at times during the day. Some pain through back of head and neck at night. Would often be unable to turn head freely. Right wrist began to feel weak recently. Complaints of soreness on left side. Felt a peculiar dullness or stiffness in the flexor group of muscles in the left forearm. Shoulder movements free and painless. Slight numbness in fingers and for days at a time lost almost completely muscular power in the left arm. At times she could not move the arm at all. The sensation to pain as tested by pin pricks was decreased on the ulnar side of the left arm up to the elbow but not on the radial side. Sensation was very dull on the little finger, and somewhat on the posterior surfaces of all the fingers, particularly the tips. Nodding of the head caused pain on the right side at the base of the skull. The muscles of the arm were slightly spastic particularly on forced movements. The reflexes were exaggerated. Neck muscles rigid on palpation particularly the left, muscles atrophic in left forearm, particularly the flexor group and also the ulnar, no joint disease anywhere. No tenderness over the vertebrae. Pupils unequal, left larger than right. Lung condition: marked destruction of left upper lobe; left border of heart beyond anterior auxiliary line, right lung fairly free.

It is interesting to note that shortly after these symptoms manifested themselves the patient developed tuberculosis of the left ankle joint, which was additional evidence of the wide dissemination of the disease. In spite of the severe lung condition the bone disease completely recovered and all the symptoms of the meningeal infection subsided. Tuberculin used throughout the course of the disease.

There is some question in this case whether the extreme destruction of the apex did not bring about a mechanical effect upon the left brachial plexus, but the slight symptoms on the right side are evidence against this theory.

This case illustrates that recovery may ensue in mild meningeal tuberculosis and unquestionably the use of tuberculin in this case was of great assistance. Dr. C. C. Browning has in an unpublished report described a marked case of basilar meningitis in a young girl treated with tuberculin with good recovery. This case was exhibited before the County Medical Society of Los Angeles.

P. Foa reports an instance of healing of a tubercle in the cerebellum. In a child which had died of parenchymatous nephritis, an old healed focus was found in the cerebellum. About a year previous symptoms of meningeal irritation had existed but passed away.

Janssen reports a case with meningeal symptoms which disappeared and the patient died of pulmonary tuberculosis. At autopsy several small tubercles were found in the meninges.

Freyhan reports a case of meningitis, which recovered in which tubercle bacilli were found. The acute type of basilar tuberculosis may terminate in a more chronic form. In fact it is a question in my mind whether the so-called cures are not merely the transformation into a latent condition. Clinically some signs will still persist. These cases may die at any time of an acute exacerbation of the disease. The tuberculous deposits become fibroid and encapsulated and give rise to Jacksonian epilepsy, contractures, aphasia,

etc. Such a case is described by Anglade and Choevreaux. In a pulmonary case symptoms of epilepsy developed. After a number of years the patient died in status epilepticus. At autopsy there was besides a left sided lung tuberculosis, thickening of the pia, with normal cortex. In the area of the pial involvement, the vessels in the cortex were thickened, the cortical cells atrophic with necrotic patches and in places glial overgrowth. A solitary tubercle with bacilli was found over the right hemisphere in the meninges.

Von Dupre, Hauser and Sebillieu describe cases of chronic spinal meningitis, which showed at times acute exacerbations.

Spinal tuberculosis is even more rarely found than basilar. It is not unlikely that they are more often associated than we think only we do not make the necessary search. Isolated spinal meningitis of tubercular origin, however, has been described. Hoche reports a case of a twenty-six-year-old girl with both upper lobes infiltrated, the nervous system apparently normal, developed nightly delirium, opisthotonus, somnolence, weakness of the lower extremities and of the sphincters. Anatomically was found spinal tuberculosis of the meninges, and degeneration of the column of Goll and the pyramidal tract in the cord. Dinkler describes a case of motor paraplegia, disturbance of sensibility in the lower extremities and sphincter disturbance. Pressure symptoms also existed. The autopsy showed fungous outgrowth from the first and second dorsal vertebrae with compression of the cord and secondary myelitis and tuberculosis of the meninges.

Dupre, Hauser and Sebillieu describe a case with lung tuberculosis and pleurisy developed weakness of the legs with increased reflexes, positive Babinski reflex and stupor. Later delirium developed, disappearance of the reflexes, emaciation of the extremities, total anesthesia up to the navel; bed sores, and death in coma. The cord was affected from the sixth to tenth dorsal region, fibrous pachymeningitis (no tubercle bacilli), leptomeningitis thickening of pial vessels, and in the appendix an old fibrous tubercle. In the gray substance, no changes. In the white substance, myelitis sixth to ninth dorsal segments. Meningeal thickening to sixth cervical segment. No caries of the vertebrae. In the Sylvian fissure of the brain on both sides, was found small old tubercle and meningo-encephalitis. The author held that the latter only caused psychic disturbance, and that the tuberculosis of the lungs and central nervous system existed for a long time and death came from the secondary infection in the spinal meningitis.

Other cases of mixed cerebral and spinal tuberculosis are reported by Von Londe and Brouardel.

Von Cernville and Stilling report a case which showed marked degeneration of the column of Clark. In general one can say that tubercular meningitis spinalis may cause degenerative changes in the spinal cord also meningo-myelitis. Other etiological factors which seem to play a part are alcohol and syphilis.

It has long been known that nervous symptoms may arise in the course of familiar infectious diseases, such as typhoid fever without apparent anatomic changes in the meninges or in the brain. Definite meningitis and encephalitis also may be found after death without having given rise to any definite symptoms or no symptoms differing from the above group. The *Journal, A. M. A.*, in an editorial recently calls attention to the work of Oseki in regard to these cases. Oseki found that in some instances, diagnosed as meningitis clinically, the post-mortem examination showed no gross changes except perhaps a moderate amount of edema and occasionally a very slight opacity of the membranes. On microscopic examination, however, there were found definite acute inflammatory changes with leukocytic and lymphocytic infiltration of the meninges and in the brain substance. The picture was that of an acute meningo-encephalitis, and as the process in the brain substance was most marked next to the meninges it seems reasonable to assume that the course of the process spread downward from the meninges. In another group of cases, however, the changes were confined entirely to the brain substance, showing that in encephalitis the meningeal symptoms may predominate as previously described by others. Oseki encountered cases of pneumonia in which meningitis and encephalitis were found to be present after death but of which there had been no symptoms whatever during life. In only one case could the changes be recognized by the naked eye.

Therefore it is very necessary to examine the cortex and meninges microscopically in order to detect the changes such as may exist. No doubt many of the cases of so-called "meningism" occurring in tuberculosis can be ascribed to the fact that in the absence of gross changes no microscopical study was made.

J. Finel and P. Gastinel in the April *Revue de Medicine*, review the autopsy findings in regard to a number of cases of meningeal involvement in the tuberculous. Extremely variable lesions from an acute inflammatory infiltration to diffuse sclerosis with fibrous nodules and cystic formations may be found. On the other hand the meninges may display a remarkable tolerance to the tubercle bacilli and the lesions run an entirely latent course. In other cases the meninges may be extremely intolerant and react with intense symptoms to minimal or transient injury. The phases of alternate latency and intolerance can only be explained on the basis of vaccination according to immunity theories.

Tuberculosis of the meninges in adults may, therefore, come on apparently with great rapidity and terminate within a few days. On the basis of these studies the suddenness of the onset in these cases may be explained in that there occurs a lighting up of an old focus, partially healed or latent. From a pathological standpoint this has been demonstrated in a few cases. The absence of definite anatomical findings in cases showing meningeal symptoms can be explained partly on the basis of insufficient microscopical examination

of the brain and its coverings. In some well studied cases a mild meningo-encephalitis, without actual tubercle formation explains the symptoms. These changes, however, may occur without symptoms. Furthermore, actual tubercle formation in the meninges or brain substance may exist and give no hint of their presence. It is to be urged that tubercular patients presenting mental or nervous symptoms be carefully studied, and the pathologic-anatomic data secured.

Unquestionably, clinical healing of slight foci in the meninges or brain occasionally occurs. Tuberculin treatment should not be withheld in these cases, but the dosage should be much smaller than for the pulmonary disease. The anatomical evidence also demonstrated in the few cases accessible to study, that healing will take place. How long such lesions may remain "latent" and eventually cause death one can only judge in the light of similar conditions elsewhere.

From a predisposing standpoint, trauma to the skull seems important. Also psychic trauma certainly plays a factor.

The symptoms in these cases are often uncertain and present varying pictures. From the standpoint of the rather uncommon termination of pulmonary tuberculosis, the study of the varying causation, clinical picture and pathological anatomy of tubercular meningitis in adults holds forth considerable interest.

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TWO CASES OF APPENDICITIS WITH CERTAIN POST-OPERATIVE COMPLICATIONS.*

By JOHN LOUIS LOHSE, M. D., Oakland.

The two cases that I have to report are both cases of acute appendicitis with rupture. Because of the not unusual complications that followed operation and the results obtained by measures instituted for their relief I consider them to be cases of special interest.

Case No. 1. The patient, a Japanese, 26 years of age, was first seen in consultation with Dr. von Adelung at time of entrance into hospital, August 1st, 1911. He complained of intense abdominal pain that had its onset three days prior. The pain was most severe in the lower right quadrant and was continuous. There had been no vomiting. There was marked tenderness on pressure over and about McBurney's point. Right rectus rigidity was very marked and on palpation a sense of tumefaction about the point of greatest tenderness could be elicited. Temperature was 100.6°; pulse 88; leukocytosis 24,200, 86% being polymorphonuclear.

The patient gave a history of obstinate constipation prior to his illness; appetite was always good and he said he never had suffered from any digestive disturbances. However, his general health had been poor for some time.

A diagnosis of acute appendicitis was made, and because of the rapidly increasing severity of the symptoms, the large area of marked tenderness on pressure, the tumefaction and high leukocyte count it was thought probable that rupture had taken place.

Immediate operation was advised and performed. Under ether anesthesia a Deaver incision was made and the peritoneal cavity opened. A moderate amount of sero-purulent fluid escaped and the presenting loops of intestine were red and presented areas covered with plastic exudate. No adhesions were encountered; nor was there any evidence of a protective wall around the appendix. The appendix was located with considerable difficulty. It protruded by about two-thirds of its length from behind the inner margin of cecum, high up, and was held firmly by its proximal extremity to the floor of the iliac fossa. It was dark red in color, greatly swollen, covered with particles of exudate and about its centre was a small gangrenous area where rupture had taken place.

Because of the indications of a well advanced peritonitis and the necessity for haste only that part of the appendix that protruded from behind the cecum was ligated with its mesentery and removed.

Multiple cigarette drains were used. The wound was left wide open for efficient drainage. Patient was returned to his bed with pulse of 86 and in fairly good condition. Fowler's position was resorted to and rectal infusion of normal saline 40 to 60 drops to the minute was commenced immediately. There was only slight nausea, no vomiting immediately after operation and six hours later

he expelled considerable gas. For the next five days the indications were favorable for an uninterrupted recovery. The bowels were moved by enema with good result, the pulse ranged from 62 to 88 and the temperature 97 to 99; gas pains did not cause as much distress as usual.

On the fifth day the patient began to experience considerable abdominal distress in that there was pain, spasmodic in character, and increasing in intensity. He began to hiccup, felt nauseated and belched up gas and mucus occasionally. On the seventh day he was vomiting instead of belching, first stomach contents then a bile stained fluid. When the vomiting of the brownish fluid became quite frequent to the surprise of everybody three or four round intestinal worms were found in it. Up to the beginning of the ninth day the results of enemata became decreasingly small in quantity until finally they returned clear. Spasms of pain became intense, tympanitis very marked and peristalsis was visible during the paroxysms of pain. Vomiting continued, temperature in the afternoon was 97°, pulse 120; and the patient rapidly getting weaker. All symptoms pointed to obstruction of the bowels. Every effort had been made to overcome it but without avail, and a second operation was decided upon.

Ether anesthesia was employed, the original wound opened wide, and a rapid search was made for the obstruction. Loops of intestine were only slightly adherent, some greatly distended and others collapsed. One loop was found with a greatly distended proximal limb and a collapsed distal limb. It was quite adherent to the brim of the pelvis posteriorly. However, it was readily loosened with the finger and immediately the collapsed bowel began to fill with gas. This then was the cause of the obstruction. Drainage was again employed and the patient was again returned to his bed with pulse ranging from 130 to 150 and quite weak. Modified Fowler's position and the saline per rectum were used. Ten hours after operation the patient began passing large quantities of fecal matter involuntarily. For next thirty hours indications were very favorable, the pulse dropping down from 158 to 110 and the patient fairly comfortable. Symptoms of intestinal obstruction then manifested themselves again. This time, however, they were much more acute and signs of prostration came on within a few hours. An emergency operation was then resorted to.

A distended loop of small intestine presented itself in the wound and in this was secured by means of purse-string sutures a quarter-inch rubber tube. Large quantities of gas escaped through it immediately, and with it came gushes of fecal matter. Within a few minutes the abdomen was much softer and the patient much relieved. Fifteen hours after the intestinal drainage was resorted to, pulse dropped from 140 to 110. Vomiting stopped at once and about twelve hours after the patient had a bowel movement of a large quantity of liquid fecal matter. Undoubtedly the obstruction was only partial but with the distension of the intestines from gas formation the kinking became more acute and the obstruction complete. However, with the release of pressure against the point of obstruction it became relieved and the intestinal contents began to go the normal way.

During the next sixty days patient improved rapidly. His pulse ranged about 80, was taking on weight, and suffered from no abdominal distress whatever. Bowels moved normally almost every day but occasionally enemas were given. The fistula required constant attention in that it discharged intestinal contents of great digestive power and as a consequence the skin around the wound would within a few hours, if neglected, show foci of ulceration. Granulations formed rapidly and it was hoped that the fistula would be closed by the natural contraction of the wound. An attempt was made to close it with a Lembert suture but without

*Read before the Section of Medicine of the San Francisco County Medical Society, August 6th, 1912.

success. The intestinal mucosa seemed to pout more and more as days passed by. Accordingly it was decided to operate for the closure of the fistula. This was done sixty days after the fistula was established. The wound was cleansed as thoroughly as possible, packed with gauze and covered with gutta percha tissue. An incision was then made in the median line, the limbs of the loop that the fistula was made in were located, and a lateral anastomosis made. The median incision was then closed. The old wound was exposed, adherent loops of intestine were released and the fistula that was large enough to admit the ends of three fingers closed by over and over sutures.

Because of the highly digestive powers of the intestinal juice with which this wound had been continually bathed, it was felt that it was sufficiently clean to warrant closing tight after freshening the edges by removal of scar tissue. This was done and at the end of two weeks union had taken place by primary intention, leaving a strong abdominal wall. The patient six months after his discharge from the hospital was enjoying good health, and his abdominal wall about the site of the wound showed no sign of weakness that would predispose to the formation of a hernia.

Case No. 2. Patient a male, age 25 years, occupation, clerk. Was first seen Wednesday morning, Nov. 15, 1911. He gave a history of having eaten the day previous for luncheon a number of frankfurters and a quantity of sauerkraut. About four o'clock that afternoon he suffered considerable epigastric distress. After vomiting a large quantity of undigested food he felt much relieved but still suffered from soreness through his entire abdomen. When seen Wednesday morning his pulse was 80, temperature 99°, the entire abdomen was somewhat sensitive to pressure especially in the epigastric region; there was no muscular rigidity, nor did he complain of any special tenderness about the region of the appendix. A diagnosis of acute indigestion was made and a dose of castor oil was administered, two or three copious bowel movements following. The patient was again seen the next morning. Pulse was 95, temperature 99.2°; his facial expression was one of anxiety in marked contrast to the placid expression of the day before. The abdominal pain had become more localized about the umbilicus; there was marked right rectus rigidity and pressure just to the right of the umbilicus caused extreme pain. A diagnosis of acute appendicitis was made and the patient removed to the hospital at once. Urine examination was negative, leukocyte count was 21,000, polymorphonuclear percentage was 96.

Operation was performed without delay and the following conditions were found: The cecum was turned on its long axis so that its free extremity was lying beneath the attached margin of the meso-colon; the great omentum was drawn up about the cecum and appendix. The whole mass was delivered and the appendix freed. It was very swollen, engorged and at a gangrenous point near its apex rupture had already taken place. It was removed as was also a swollen, indurated and discolored part of the omentum that immediately surrounded the appendix. In tying off this part of the omentum I wish to mention that No. 1 iodized catgut was used. Cigarette drains were used and the wound left well open. This unusual location of the cecum and appendix undoubtedly accounted for the absence of the usual local findings in appendicitis in the right iliac region.

Normal saline per rectum and Fowler's position were employed. Up to the tenth day the patient's progress was very satisfactory. His pulse ranged between 60 and 80 and the temperature seldom reached 99°. Bowel movements of good character and quantity were procured daily and he felt quite comfortable. On the fourteenth day, however, he began to belch considerable gas, felt nauseated and appetite failed him. The belching went on to

vomiting, and the abdominal distress from distention and spasms of pain became very intense. Three days after no result could be obtained by enema and peristalsis became visible. There was every indication of acute intestinal obstruction and after it was demonstrated that no relief could be had by the simpler methods, the patient was taken to the operating room, the old wound opened wide and the abdomen explored. In the umbilical region a number of loops of small intestine were found massed together and held by plastic exudate. They surrounded the ligated stump of the omentum of which a part had been removed. In this stump was a small abscess containing about one drachm of pus. No foreign material could be found.

The relief anticipated from freeing these loops of intestine was not obtained. A few hours after the operation a considerable quantity of liquid fecal matter and flatus was passed. But after that all the symptoms of obstruction recurred and at the end of the second day the patient's condition was so alarming that it was decided to institute intestinal drainage. This was done by puncturing a distended loop of bowel, that presented itself into the abdominal wound and a rubber tube inserted and held in situ by a purse-string suture. So long as the parietal peritoneum was not touched in doing this the pain was nil and the patient suffered absolutely no distress during its performance. The abdominal distension that existed just prior to this was tremendous. The abdominal wall was tense as a drum-head, liver dullness was obliterated, the costal margin bulged and respiration and heart action were interfered with greatly; undoubtedly this patient could have lived but a few hours longer under such conditions.

The relief from the intestinal drainage was immediate. Large quantities of gas and liquid fecal matter shot through the tube and at the end of an hour the patient was sleeping soundly. Thirty hours later, he began to expel gas per rectum and after the end of second day with the aid of enemata satisfactory bowel movements were procured daily. He was able to take liquid and soft nourishment in fair quantities and his general condition improved markedly from day to day. A few hours after the intestinal drainage was instituted a second fistula appeared in the cecum.

The laparotomy wound began to granulate well. At the end of three weeks an abscess formed just beneath the parietal peritoneum about two inches above the wound. This was opened by rapidly insinuating the finger between the abdominal wall and intestines and it was kept open by using a rubber tube. Pus kept discharging for a number of days, and with the possibility of a piece of infected and non-absorbable catgut being the cause of the persistence of the pus-formation the cavity was explored with a pair of tissue forceps. A hard, tough knot of catgut was removed. This, then, was the cause of all the complications arising in this case.

The wound healed rapidly after this but the fistula persisted and showed no disposition to close. Six weeks later under novocaine and adrenalin anesthesia the involved loop was freed, the fistula was closed with two layers of interrupted catgut sutures, the edges of the abdominal wound freshened and sutured with through and through silk-worm gut. No drainage was instituted and in two weeks the wound was firmly healed.

The patient is now at work and suffers no distress.

From the study of these two cases emphasis may be laid upon the following:

1. That the ultimate result following operation for such acute infective conditions where the infection is spread well beyond the initial focus carries with it a great element of uncertainty.
2. That the cohesive character of the visceral peritoneum when inflamed and covered with par-

ticles of plastic exudate is a factor to be seriously considered in the post-operative treatment.

3. That the character of catgut used in the peritoneum for any purpose should be of the best quality to insure complete absorption and it should be of the lightest weight possible that is consistent with the purpose it is intended to serve.

4. That the intestinal paresis that results from manipulation especially in the presence of infection is a factor of such gravity that every measure should be instituted to prevent its occurrence.

5. That when obstruction exists as a result of such paresis and is aggravated by partial constriction from adhesions, a stretching of the intestinal musculature takes place from the accumulation of gases, and that this overstretching may be to such a degree and so prolonged that it is impossible for the musculature to regain its tone.

6. That the absorption of toxins from the intestines under such conditions is the most potent factor in causing the death of the patient.

7. That for the purposes of relieving pressure within the intestines and so permitting the musculature to regain its tone, and for the purpose of preventing absorption of toxins from the bowels intestinal drainage through an artificial fistula is most efficient.

CHINESE MEDICINE IN AMERICA.

By CHARLES KIRKLAND ROYS, M. D., Wei-hsien, China.

Conditions in China as a result of, or in spite of, the native practice of medicine, are bad enough; but it appears that certain wily Celestials are actually trying to introduce their system of medicine into America. It is hard for one not on the ground to tell just how far this propaganda has advanced, but to judge by pamphlets and newspaper articles, it has gained quite a foothold, at least on the Pacific Coast. At any rate, it seems time that the public should know something of the truth about the native pharmacopeia and practice of medicine in China. The writer has no intention of being drawn into a controversy on this subject. A certain wise old medical man (named Oliver Wendell Holmes) once said: "Controversy equalizes fools and wise men, and the fools know it." This adage largely explains why medical men as a class are so slow to enter the lists and appeal to the public prints in defense of what they know to be the truth. It is only in cases of glaring misstatement, with plausible promises incapable of fulfillment, that the temptation to tell a little truth, if only to relieve the monotony of lies on the subject, becomes irresistible.

The ethical principles involved in quackery and the vending of nostrums are not at once evident to all minds. Indeed, to some, the practice seems to have no ethical bearing at all; while some of the vendors even pose as "friends of the human race." Why should a simple combination of harmless drugs, which passes the tests of the Pure Food and Drug laws (and advertises the fact), be frowned upon by bearded medicos? Is there any reason, outside the danger to their business, which actuates these men? They are not infallible; they often do not agree over a case or a treatment; why should they unite to cry anathema when the subject of patent medicines is mentioned?

In the last analysis, it is because the actual effects, the end-results, of this particular form of

confidence-game are apparent and familiar to this small proportion of the community only, whose position as practitioners of medicine lays them open to the charge of prejudice in their testimony.

Ethical ideas are best conveyed by parables. Consider then the parable of the excursion steamer "General Slocum," conveying a thousand women and children up the East River one pleasant June day six or eight years ago. Fire breaks out in the bow, and, fanned by the wind of her forward rush, sweeps the old tinder-box from stem to stern. The helpless passengers, driven to the stern decks by the blast of oncoming flame, grasp what life-preservers are available, and leap overboard, most of them never to rise again.

Why? In the inquiry of our government, vigorously paternal after the fact, the reason came out. The life-preservers were of refuse cork, held together by iron rods. They were life-preservers which could not preserve life. To trust them in emergency was death. Piled under the seats (or on the shelves of the druggist), such life-preservers are harmless enough; but both are utterly unreliable in time of direst need. And the day will come when the men who advertise the cure of consumption by this or that "balm" or "syrup" or of cancer without the knife, and so delude thousands into delay that means death, will be considered on the same ethical level as those men who put the iron rods into the life-preservers, and will be treated accordingly. People are coming to realize the place of advertised medicines, and to understand that in sickness it does not matter so much *what* is given the patient, as it does *how* it is given him.

And it is frankly with the idea of helping on this campaign of education that the writer has attempted to set forth something of conditions in China, where is found a people, the oldest and greatest (at least numerically) in the world, still dependent on quacks and charlatans for the relief of physical ills. The Chinese probably have suffered as much "at the hands of many physicians" as any people in the world. Here is a vast and ignorant population which has cherished for ages the superstition that there are cure-alls, or at least specifics, for every ill to which flesh is heir. This superstition is the foundation on which the vast fortunes of patent-medicine men are reared.

A pamphlet has been circulated for some years on the Pacific Coast entitled "The Science of Oriental Medicine, Diet and Hygiene." It was issued by the "Foo and Wing" Herb Co., of Los Angeles, and may be taken as a fair sample of the claims of these genial Orientals, and a statement of the grounds on which they are based. Dr. Foo is said to be a "graduate" of the "Imperial Medical School" of China. He desires to found a school for the study of Oriental Medicine in America, on the ground that this system, having come down unchanged for four thousand years, must be better than western medical science, which is constantly changing, and is being added to from year to year.

Messrs. Foo and Wing seem to have been taken up by a typical patent-medicine promoter of unusual

ability, who realizes "that there are fortunes awaiting the people who are first to study into these matters, and adapt this system to the needs of our civilization" (p. 86 of pamphlet). Probably there are. The men who put the iron rods in the life-preservers probably made fortunes, too, yet they were not very popular about six years ago. And the men who delude credulous women with incipient cancer into dallying with "harmless herbal remedies," offering cures "without knife or plasters," in familiar charlatan's phraseology, should be put in the same category by all thinking people.

It does not seem likely, but there may be people in America who do not realize that the botany and materia medica of China have been investigated repeatedly by western scientists. Tatarinov, Williams, Hanbury, Porter Smith, and a host of other authorities might be cited, and only recently the writer had the privilege of meeting Mr. Frank Meyer, Botanical Explorer for the United States Government, on a trip which had covered some years of careful investigation in all parts of China. The "herbal remedies" are well-known to western physicians under their true botanical names, and with their actual, not legendary, properties tested in full by scientific methods. But, our promoter protests, foreigners have no knowledge of the ancient books from which Chinese medicine is taught. Evidently he is honestly ignorant of the number of times that the writings of the legendary "Shen Nung" (2700 B. C.) have been read and studied by sinologues like Dr. S. Wells Williams, and botanists like Dr. Ernst Faber, whose knowledge of the "Wen-li," or literary language of China, was certainly equal to that of Mr. Foo or Mr. Wing, and who were further possessed of scientific training and critical faculties which are entirely foreign to the parrot-knowledge of the Chinese scholar. There is no lack of knowledge of the foundations on which Chinese medicine rests, both in the writings ascribed to Shen Nung, and in the much more compendious work of Li Shi-chin, a little handbook in forty volumes; which is only some three hundred years old, and so not ranked as a first-rate authority by the physicians of the "old school," with whom Mr. Foo claims affiliation. The chapters in the pamphlet under consideration for which the learned Foo is evidently personally responsible, are a very fair presentation of the teaching of Chinese medical works. To avoid any possible charge of prejudice in translation, we will take his statements of Chinese ideas on human anatomy and physiology as they stand. If these statements are taken at their face value, then this production, appropriately bound in yellow, can have little peril to any one even dimly familiar with facts. It needs only a most cursory reading to show the absurdity of calling this medley of vague tradition, superficial observation, and illogical deduction a "Science" of Oriental Medicine.

We read that "The lungs belong to the mineral element. . . . They look like an umbrella. They have eight lobes." . . . "The Heart. When a man sleeps, the brain power returns to the heart." "The power of the Heart-case (pericardium?) goes through the natural heat between

the two kidneys, where is the seat of life. The heart and the brain and the kidneys are all connected by the current of air through the natural heat, and make up one family." This is proved to the entire satisfaction of the Celestial logician by the following facts: "The pulse follows the spine to the brain, and the kidneys furnish juices to the brain. This is shown because the natural juices of the kidneys are white, the marrow of the spine is white, and the natural juices of the brain are white." Later Mr. Foo gives a very good account of the Chinese cosmogony, which was also elucidated by the great and good Shen Nung, four thousand years ago, "Everything in the world is included in the five elements, namely, water, mineral, vegetation, fire and earth. In the vital organs there are also five kinds of elements, and everything in vegetation corresponds. . . . The color of things belonging to the fire element is red, the taste is bitter, and the power from these rushes through the system. These . . . influence the heart, the heart-case, and the small intestine, which belong to the fire element." "The natural color of the vegetation element is green. Now the gall is green, so you may know that the liver and the gall belong to the vegetation element." "Again, the natural color of the fire element is red. The blood is red. Therefore the heart and the heart-case belong to the fire element." Not to run through the entire classification, arranged on this most simple and convenient basis, we will choose one more gem. "The natural color of the earth element is yellow. The stomach gets power from the spleen, which produces the gastric juice. The color in this case is yellow—so you can know that the spleen and the stomach belong to the earth element."

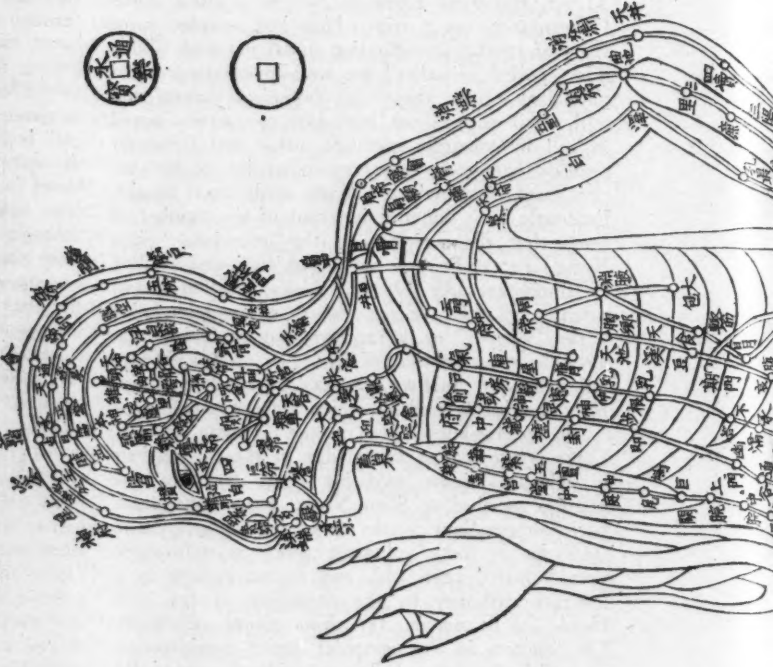
Please remember that these statements are printed in English, copyrighted in America, and intended for American consumption. Furthermore, to judge from the names signed to the usual testimonials of patent medicine literature which are appended, these statements have been swallowed by a "Judge," a "Reverend," and have been masticated at least by a newspaper editor; who, of course, may not swallow everything he sees fit to print. But let us return to Mr. Foo and his cosmogony, which is undoubtedly his honest belief, along with the few hundred millions of his countrymen who have held this venerable creed for so many centuries.

"Mineral produces water: water produces vegetation: vegetation produces fire: fire produces earth: earth produces mineral." "The mineral element is stronger than the vegetation, and can control it; vegetation controls the earth, earth controls water, water controls fire, and fire controls mineral; water can stop fire and dissolve mineral." . . . "This is the simplest explanation of the relation between the herbal remedies and their effects on the different vital organs." Here you have in a nutshell the Chinese conception of nature and the working of natural laws. According to this, medical science is on the same basis as astrology, and certain drugs influence certain organs by mysterious laws of relationship, as certain planets influence certain destinies. And this beyond question.

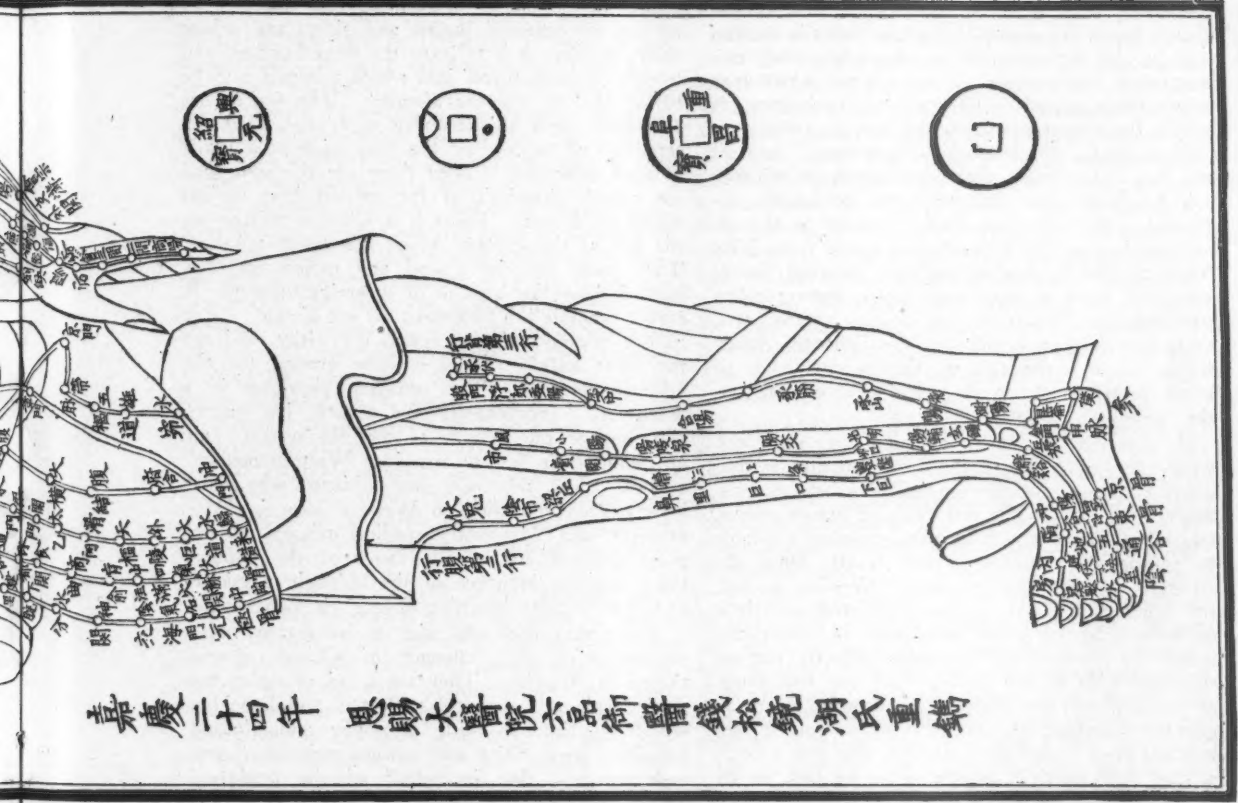
CHINESE MEDICAL DIAGRAM
OF THE HUMAN BODY.

側人明堂圖

經言肺之原出於
太淵心之原出於
太陵肝之原出於
太衝脾之原出於
太白腎之原出於
太谿心之原出於
兌骨即神胆之原
出於延墟胃之原
出於衝陽三焦之
原出於陽池膀胱
之原出於京骨大
腸之原出於合谷
小腸之原出於腕
骨是十二經之原
又不可不知也



SOME OF THE PLACES WHERE
NEEDLES MAY BE INSERTED
TO LET OUT DISEASE, SHOWN
BY SMALL CIRCLES. PARAL-
LEL LINES SHOW IMAGINARY
AIR-PASSAGES IN THE BODY.



嘉慶二十四年 恩賜太醫院六品御醫錢松鏡湖氏重鐫

is still the view of many people even in America, including some Judges and Reverends, who fail to realize that the actions of a drug in the human body are definite chemical combinations and physical reactions, selective for certain tissues, and becoming more clearly understood and formulated with each succeeding year. As Prof. Cushney says, "The action of drugs is quantitative and not qualitative; the activity of living matter may be changed, but the form which the activity assumes is unchangeable."

In other words you can quicken or retard the action of the heart, by giving the proper drugs in the proper way, but no drugs will make the heart do anything but pump blood through the arteries and veins. The Chinese idea, and that not uncommonly held even in America, is that certain drugs have the power to go to certain organs, and by the exercise of some mysterious and transcendental force, drive out any disease which may affect these organs. This is the superstition to which the patent medicine men appeal, with their "kidney-cures," "liver-cures," "lung-cures," and all the long list of cures over which so much printer's ink has been shed, and so many landscapes disfigured. We are quite ready to laugh at the absurd notions of the Chinese, but a trip from New York to Philadelphia by daylight, between almost unbroken rows of signboards whose staring colors proclaim the virtues of this or that "cure" will show how large a proportion of enlightened Americans are still, through an unreasoning habit of mind, pretty much on the same level mentally as the "heathen" at whom we laugh.

As to actual conditions in China, they are about what one would expect where over-population produces a fearful struggle for existence, where ignorance leads to constant infraction of nature's laws, and where there is only denser ignorance available to relieve the suffering which results from the struggle and the law-breaking. Needless to say, the Chinese medical profession contributes little or nothing to the actual betterment of conditions; indeed its efforts could be more properly put on the debit side of the account, for the few drugs of value within the scope of its knowledge are so generally misused, and its practice is so full of useless and even brutal maltreatment, that not a little of this sum total of misery must be laid to its charge. Even the best of them, "graduates" of the "Imperial Medical College," are the merest ignorant empirics. Dr. S. Wells Williams, for years the Secretary of the American Legation at Peking, with unequalled opportunities for observation, says of this "College": "There are nine main divisions in Chinese medicine. . . . A professor of each of these classes is attached to the Royal Family, who is taken from the (Imperial) Medical College at Peking. But he has no greater advantages than he could get from his own reading and practice. No museums of morbid or comparative anatomy exist in the country, nor are there any lectures or dissections; and the routine which old custom has sanctioned will go on till modern practice, now rapidly taking its place, wins its way." China can usually show the oldest examples of any

form of abuse or fraud, and here is the oldest example of the "diploma factory" for physicians, now fortunately all but extinct in America. Its graduates have a parrot-knowledge of an appalling array of huge tomes, but in the words of a rustic philosopher, "It is better not to know so much, than to know so much that ain't so." As Remusat said of them: "In place of studying the organization of bodies, they undertake by reasoning to determine how it should be: an aim which has not seldom led them far from the end they proposed."

If this is true of the best that China can produce, the court physicians of the Emperor, it is not hard to appreciate the attainments of the average Chinese medical man, and to understand the results of his practice. There are the "needle-doctors," whose entire armamentarium consists of needles of different shapes and sizes, and whose entire training it is to learn the three hundred and twenty or more places into which a needle may be thrust to "let out the disease." The writer has repeatedly seen old festering sores and even destruction of the eye or the knee-joint as a result of such punctures. Then there are the men who use caustic chemicals or the red-hot iron for all forms of disease. There is a Chinese treatise on the use of the cautery which fills seven volumes. Then there are the absurd and useless remedies handed down for ages as of sovereign efficacy. A classic example is a treatment for eye disease. "Put half a chicken over the eye as a poultice, and eat the other half." There is some ground for the Chinese proverb, "The ordinary physician is a murderer." Fortunately for China, its leaders now realize the defects of the old system, and are doing their best to introduce Western medical science. The relatively few Chinese who have been trained according to Western ideas in Government and Missionary medical schools are in great demand among all classes of the population; and the influence of the old-style physician of China is daily lessening among his own people.

The writer does not wish to be charged with overestimating the influence of Chinese practitioners in America. They are a fad of which the good people of Los Angeles, Boston, and Brooklyn will soon tire: as with theosophy and kindred delusions, these cities will always welcome "some new thing." But in behalf of the credulous woman and the defenseless child who suffer by these follies, the truth should be given at least as much circulation as the falsehood, even if somebody loses money thereby.

SARCOMA OF THE UTERUS.*

By EMMET RIXFORD, M. D., San Francisco.

Sarcoma of the womb is commonly regarded as a comparatively rare tumor and as a consequence has received very little attention from clinicians until within recent years. While cases of "recurrent fibroids" had been observed and recorded and which were doubtless sarcomatous, the first case to be designated sarcoma of the womb was reported

* Read before the Forty-Second Annual Meeting of the State Society, Del Monte, April, 1912.

by Carl Mayer in 1860, a polypoid sarcoma of the uterine mucous membrane of which the diagnosis was verified by Virchow. In 1867 Veit got together three cases, and in 1871, according to Senn, Keegar based an investigation of sarcoma of the uterus on nine cases reported up to that time. The statistics of Gurlt showed that of 2,649 uterine tumors 1571 were diagnosticated as carcinoma, 883 as fibro-myoma and only 2 as sarcoma, i. e., 1 sarcoma to 1228 uterine tumors or 1 sarcoma to 785 carcinomata. Roger Williams in England found only 8 sarcomata in 4115 uterine tumors or 1 in 514.

Recent statistics, however, show a very different frequency. Geisler in the Frauen Klinik at Breslau put the relative frequency of sarcoma to carcinoma as 1 to 50, and Veit, gathering together the material in the clinic of Halle for 17 years, found 40 sarcomata to 1493 carcinomata or 1 to 37.1. Krukenberg found 1 to 47.5 in the University Frauen Klinik at Berlin. We therefore may assume that the estimated frequency of the diagnosis of sarcoma of the womb compared to that of carcinoma is approximately 1 to 40.

It is probable, however, that even these figures underestimate the relative frequency of sarcoma of the womb, largely because of the difficulties in diagnosis and because statistics are very apt to include cases which have not been subjected to thorough microscopical examination by competent pathologists. Veit asks the question how often is the diagnosis of inoperable carcinoma of the cervix made on clinical grounds alone, and he calls attention to the fact that the resemblances of sarcoma to carcinoma in this region are so great as to make differential diagnosis difficult; moreover it should be remembered that mixed forms of carcinoma and sarcoma occur in the cervix uteri as well as alveolar sarcoma which may readily be mistaken for carcinoma.

My own personal cases in private practice, with systematic microscopical diagnosis, show a much greater frequency than the above figures would indicate although the number of cases is too small to warrant anything very definite being predicated concerning their significance. I have performed hysterectomy in five cases of sarcoma of the womb and during the same period have removed fibromyomata in sixty cases and carcinomata of the womb in twenty, making the relation of sarcoma to uterine tumors in general 1 to 17, and of sarcoma to carcinoma 1 to 4.

A full bibliography of sarcoma of the womb up to the year 1908 is to be found in Veit's *Handbuch der Gynaekologie*, Third Edition, with exhaustive discussion on the anatomy and histology by R. Meyer and the clinical considerations by J. Veit of Halle.

To the pathologist sarcoma of the womb is of particular interest because the tumors frequently consist of non-striped muscle, the tumor being a malignant leio-myoma and the question has given rise to much investigation and debate as to whether the muscle cells in the tumors are essential parts of the malignant neoplasm or merely the result of growth of muscle cells infiltrating between the

bundles of fibrous tissues in the round celled or spindle celled forms of sarcoma. It would appear that the preponderance of opinion is in favor of the former view—(Mallory).

Between the pure leio-myoma and the spindle celled sarcoma lie transitional forms in which the proportion of muscle cells to spindle cells varies from one extreme to the other. Again different parts of the same tumor will present different histological characteristics.

Of the sarcomata of the wall of the uterus, most, if not all, have their origin in pre-existing fibromyomata as shown by many observations of small sarcomatous areas found within typical fibromyomata, a fact which is of the greatest clinical significance.

There is much confusion in nomenclature arising from the curious mixture of forms of mesoblastic tumors found in the womb. There have been described in addition to the forms mentioned, myxosarcoma, lipo-sarcoma, alveolar-sarcoma, angio-sarcoma, etc., etc., the matter being further complicated by degenerative processes. Following Meyer it would be preferable to limit the use of the word myo-sarcoma to designate a mixture of myoma and sarcoma, i. e., two individual tumors coexisting and in the same way carcino-sarcoma, angio-sarcoma, etc., designating the sarcoma in which muscle cells predominate as myomatous sarcoma and that in which spindle cells predominate as fibromatous sarcoma and intermediate forms as myo-fibromatous sarcoma.

Cases have been recorded of multiple sarcomata within the uterine wall: tumors varying in size from that of a pea to that of a walnut in the same womb. A condition difficult to account for unless by metastasis, but the very occurrence of which argues strongly against partial hysterectomy in favor of total.

To the clinician the chief interest in sarcoma of the womb is in the clinical problem of making the diagnosis at a time when operative removal may be efficient as well as in the operative procedure indicated. In this connection it should be said that the malignancy of these tumors varies greatly. Some of them may exist a long time and grow to immense size without forming metastases, while others form metastases comparatively early. Olshausen removed a sarcoma of the uterus the size of a man's head, and Terrillon reported one said to have weighed 20 kg. The largest tumor of my personal cases weighed seven pounds.

Sarcoma of the womb is of much lower degree of malignancy than carcinoma in the sense of the tendency to the formation of metastases and to local recurrence after operative removal, but on the other hand it commonly grows much more rapidly and undergoes necrosis and breaks down under infection more readily and by infiltration, hemorrhage, and sepsis, destroys life quite as surely and much more rapidly than carcinoma.

The disease is not confined to any period of life. Cases have been reported as occurring in children under 5 years and in women over 70. The greatest period of frequency, however, is between 40

and 60. In the five cases here reported the ages at time of operation were 61, 40, 41, 35 and 50.

Excluding from present consideration the rare but exceedingly malignant *sarcoma botryoides* which appears in grape-like masses hanging from the cervical canal, sarcoma of the womb occurs clinically in two principal forms, the one developing in the wall of the uterus and the other in the mucous membrane, the first resembling fibro-myoma in its clinical and microscopical aspects, the other being difficult to distinguish from carcinoma, especially if diffuse and affecting the cervix.

It is not always possible to differentiate the wall sarcoma from mucous membrane sarcoma, especially in the later stages when symptoms such as bleeding, discharge, pain and pressure ensue, for they are common to both. In the earlier stages the mucous membrane tumors sometimes give symptoms more or less characteristic of their site.

There are no characteristic symptoms of malignancy, though persistent hemorrhage and cachexia in the absence of sufficient hemorrhage to account for the anemia and weakness are so regarded, but these are late rather than early symptoms. There will always be cases in which the sarcoma is discovered to be such only after removal of the tumor under the diagnosis of fibro-myoma, the practical meaning of which is simply to widen the indications for operative removal of fibroids.

On the part of the mucous membrane there are no characteristic symptoms even when the tumor originates in the mucous membrane—bleeding in the form of increased menstrual flow, continuous oozing in the interval occur also, in subinvolution, chronic hypertrophic endometritis and in polyposis, but sudden tremendous hemorrhages such as are common with polypi are said not to occur in sarcoma. However, in one of the five cases here reported this very form of hemorrhage did occur and so severely that the patient was practically exsanguinated when she consulted a physician for the first time.

Retention of the bloody fluids by reason of the tumor obstructing the cervical canal may occur and to an extreme degree—five quarts in one case and in another a hematometra of fifteen litres was found. Pyometra occurs occasionally in the presence of infection with obstruction.

Most of the following are late symptoms, but they are of value in making evident the necessity for haste in operative removal of the tumors: failure of an apparent myoma to shrink following the menopause, recurrence of bleeding after the menopause, development of cachexia and weakness in the presence of myoma, ascites in the presence of myoma, rapidly growing or in softening myoma and when a polyp recurs after removal (all polypi removed should be carefully examined microscopically. [Veit].

In diffuse sarcoma of the mucous membrane nothing short of total hysterectomy is indicated and in wall sarcoma of the body of the womb resembling pedunculated fibroids, total hysterectomy is preferable to partial, for the pedicle is most often sarcomatous and cases have been reported in which

the disease recurred in the cervix after supravaginal amputation.

In cases of infection and sloughing of the intra-uterine tumor or in the presence of pyometra a two-stage operation is preferable—emptying of the uterus and removal of necrotic parts of the tumor may be performed through the vagina and after some weeks either vaginal or supra-pubic hysterectomy, with preference for the latter.

Most text books discussing fibro-myoma of the womb have more or less to say about the disappearance of such tumors at the menopause, by atrophy, calcification, etc., so that it is common to encourage a patient the subject of myoma and who is entering the menopause to wait for a time to see if the tumor will not shrivel or disappear. It is dangerous advice and should be given only with the greatest caution and with the necessity of systematic examination impressed upon the patient. The development of a sarcoma in one case of fibro-myoma in which such advice is heeded will overbalance the operative risk in many cases in which the fibro-myomata might have atrophied if not molested. In one of my five cases I gave such advice but within four weeks the tumor had so increased in size as to demand removal, and it was afterwards found that even before operation a number of metastases had formed. Probably operation a month earlier would not have forestalled metastasis, as this tumor seemed particularly malignant.

Without doubt patients with fibro-myomata, especially if approaching the menopause, should be examined at regular and frequent intervals to detect any increase in size, change in character especially softening, increase of tenderness, increase in menstrual flow, bleeding recurring after the menopause, the occurrence of a foul discharge, etc. In the presence of any of these symptoms the interior of the womb should be investigated with a curette and the aid of the microscope should be sought or else an hysterectomy be performed. In fact, in my opinion the indications for operative removal of fibro-myoma should be increased rather than curtailed, that the doubts may be on the other side.

All tissues removed in hysterectomy and especially in myomectomy should be subjected to a most searching microscopical examination by a competent pathologist, and if sarcomatous tissue be found the whole womb with the adnexa should be extirpated, because even when the abdomen is opened it is often impossible to say from the appearance of the tumor whether it is simply a congested, inflamed, or degenerated fibro-myoma or a sarcoma.

Of the five cases whose histories are appended, two were in patients who had passed the menopause and all were of the type resembling fibro-myoma. Two grew from the fundus of the womb as more or less pedunculated tumors, evidently having originated in the uterine muscle and grown outwards through the peritoneum, and three projected into the dilated cavity of the womb. In two of these latter, bleeding was severe. In the two tumors projecting from the fundus of the womb there was

but slight increase in the menstrual flow. In one case in a woman of 56 who had long since passed the menopause and thought herself in perfect health, there was no bleeding whatever until the patient received a fall, when a few drops of blood appeared calling attention to the tumor, although at that time it was of the size of the five months' pregnant uterus and was widely necrotic within. The three tumors which projected into the cavity of the womb were more or less necrotic on their surfaces and one of them was deeply necrotic and infected.

Case 1. Mrs. J. A. P., age 61. July, 1902. Had 4 children, the last 20 years ago. Patient was well until the age of 47 when menstruation began to be too profuse. Shortly thereafter it became very irregular and ceased until the age of 59 when flooding again came on. The attack was repeated after 2 months and recently the hemorrhages have become much more frequent. Several hemorrhages during the last week and slight continuous oozing. Patient has had very little pain, has frequent desire to urinate but has some difficulty in emptying the bladder. Is growing weaker though appetite is good. Never noticed the tumor in abdomen, simply thought abdomen was a little prominent. Has had severe leukorrhea for a number of years. During past few years discharge has increased, it has been foul smelling and acrid, patient being obliged to use douches continually.

Status: Very anemic, nervous woman past middle age. Abdomen protuberant, containing a large, round, soft tumor with pear-shaped projection to left of the middle line. Vulva excoriated from irritating discharge. Vagina short and atrophied. Cervix atrophic. Two fingers enter cervix readily and surround large, soft, intra-uterine tumor. Very offensive odor of dead tissue. Discharge profuse. With probe, which entered 8 or 9 inches, it was possible to make out the attachment of the tumor to be chiefly on the left side and very broad. Manipulation caused considerable bleeding, controlled by ergot. Haemoglobin 30%. Leukocytes 2,400. Polys 84%. Reds 2,536,000. Urine negative. Temperature 99° to 100°. Pulse 100.

Diagnosis: Sub-mucous myoma uteri undergoing necrosis and infected.

Operation: Because of the necrosis and evident infection it seemed best to remove the tumor per vaginam. The vagina readily stretched to admit the hand and the cervix did also with slight cutting. Tumor tissue to the amount of six pounds was removed by the hand, scissors, and volsellum forceps. Hemorrhage was not severe and was easily controlled by irrigating with hot water. Uterus was tamponed with gauze and it remained firmly contracted. Duration of operation one hour. Convalescence without incident.

The pathologist, Dr. Osmer, reported the tumor to be a spindle-celled sarcoma.

Second operation after 3 weeks. Patient having gained much in strength, although the hemoglobin was only 40%, the discharge being no longer foul, vaginal hysterectomy was performed. The tumor being too large to be delivered, both uterine arteries were ligated and the uterus split antero-posteriorly and removed in halves. Convalescence normal and patient left hospital at the end of two weeks.

Five years later patient was reported as being in perfect health.

Case 2. Mrs. S., age 40. April, 1907. One child age 14 years. Several miscarriages and with one of these had chills and fever and was in bed several weeks. Present trouble first noticed 3 weeks ago. Sudden headache, chills, not referable to any known cause. Took physic and next day had pain in the pit of the stomach, whence it went to left groin. Her physician, Dr. Magnus of San Francisco, found

a large, hard tumor of the womb extending upwards into the left groin. Slight fever. Menstruation regular, normal in amount, and painless.

Status: Strong middle aged woman, apparently in good health. A pedunculated tumor connected with the womb extending upwards and to the left, the size of one's fist, markedly tender. No discharge.

Operation: Median incision. Pear-shaped tumor size of one's fist, somewhat larger at upper extremity than at its attachment to the fundus, covered with very large dilated blood vessels. Tumor soft, nodular, was thought to be malignant. Therefore a pan hysterectomy was performed. Normal convalescence. Patient left hospital at the end of three weeks.

On examination the pathologist reported the tumor to be spindle-celled sarcoma.

Four years after operation patient was reported in good health.

Case 3. Mrs. M. B., age 41. Sept., 1905. Patient had always enjoyed good health. Had three children, the youngest 9 years of age. Menstruation always regular but generally painful. Five months ago noticed hard mass in the lower abdomen unaccompanied by symptoms. Three months ago there was slight pain and patient consulted her physician, Dr. Henry Gibbons Jr. One month ago patient was referred to me in consultation. From the patient's account of her symptoms the pain did not seem very severe. Patient was not sure that the tumor was any larger than when it was first discovered 4 months previously. There had been no hemorrhage and not even any increase in the menstrual flow. No discharge.

Status: Well nourished middle aged woman apparently in perfect health. Tumor of the womb reaching well above the pubis, irregular in form like multiple fibromata, freely movable. Advised waiting a while until symptoms should arise warranting operation or the tumor should show a tendency to grow.

During the following month patient began to be very uncomfortable. Menstruation during this month more profuse than formerly. A good deal of pain because of expulsion of blood clots, it lasted 8 days. Recently has had increasing pain in the back and the right side sometimes radiating down thighs. States that the back would apparently ache more when she was in bed than when up and about. Got some relief from lying flat on the abdomen, but recently the tumor became too large to permit this. She therefore lies first on one side and then on the other and is so uncomfortable that she gets little sleep. Bowels regular. Urination a little more frequent than formerly. No evidences of pressure on bladder.

On examination tumor was seen to have very markedly increased in size. It was still fairly movable.

Operation: Median incision. Tumor not adherent, readily lifted out of the pelvis. Nodules whitish, surrounded by areas of redness with large blood vessels. There were two hard lymph glands the size of beans palpable in the right broad ligament. Over the iliac vein on the right side a rosette-like tumor $1\frac{1}{2}$ inches in diameter on the peritoneum, freely movable over deeper tissues. This was apparently a metastasis and was excised. Complete pan hysterectomy was then performed. Convalescence without incident. Patient out of bed at the end of second week.

During the third week of convalescence patient complained of several tender points in her scalp. On examination these were evidently metastases. Patient then admitted that she had noticed them even before operation. Under chloroform several of these tumors were excised. They were slightly elevated and red around the borders. Microscopical examination showed them to be similar to the uterine tumor. Patient left the hospital and a month later showed a great number of metastases in dif-

ferent parts of the body. One in the spinal canal soon caused paraplegia and patient died about 9 weeks after operation. Microscopical diagnosis by Dr. Ophüls, fibro-sarcoma of womb.

Case 4. Miss M. B., age 35. March, 1910. Referred to me by Dr. Canney. Has always been strong and a hard-working woman. The first symptom calling patient's attention to the pelvis was a severe hemorrhage from the uterus. Bleeding was profuse and lasted for 3 or 4 days. Dr. Canney found a large pelvic tumor within the uterus which bled profusely upon the slightest touch.

Status: Tall, large Swedish woman. Intra-uterine tumor about the size of 6-months' pregnant uterus. Cervix thin, dilated by tumor. Tumor soft and elastic, bleeding readily, attached to womb by very broad peduncle. Hemoglobin 45%. Temperature 100°. Pulse 120.

Clinical diagnosis: Sarcoma of the womb.

Operation: Because of the low hemoglobin and the presence of decomposing blood in the vagina and the uterus it was thought that two stage operation was less hazardous. Cervix split in middle line. Vaginal outlet incised sufficiently to admit the hand posteriorly. Tumor pulled out with forceps and scissors. Moderate bleeding. Uterus packed. Wound in cervix sutured, also wound in peritoneum. On the second day of convalescence there was a sharp rise in temperature, otherwise convalescence was without incident.

Microscopical diagnosis by Dr. Ophüls, spindle-celled sarcoma of uterus.

Four weeks later hemoglobin 50%.

Abdominal hysterectomy. Right tube and ovary absent. Small round tumor size of an egg low down near the cervix on the left side posteriorly. Because of the apparent extension of tumor into the left broad ligament, wide dissection was made, removing the whole mass between the iliac vein and the uterus except the ureter, which was isolated for about 3 inches. Peritoneum closed completely with catgut sutures by drawing the broad ligaments together and suturing them to the anterior wall of the vagina and the base of the bladder and covering bladder flap in the center. Patient strained a great deal during the operation, requiring the use of many pads to hold the intestines back, which fact may account for subsequent adhesions. Convalescence without incident.

At the end of three weeks patient left the hospital, having had hemabroids and Bland's pills. Hemoglobin 60%. Patient became well rapidly and gained in weight and strength and was able to perform her duties as a domestic.

About 8 months after operation patient was suddenly seized with severe vomiting and distress. A surgeon called in during my absence advised immediate operation for intestinal obstruction, but patient determined to wait until next day. About 12 hours after the beginning of the pain patient went into a sudden collapse and died in a few hours.

The abdomen was opened and extensive necrosis found of the small bowel, which was matted in the pelvis.

Case 5. Mrs. M., age 56. Feb., 1912. Referred by Dr. Hirschfelder. Menopause 8 years ago. Has always been a remarkably strong, healthy woman. Never sick in her life. Three months ago had slight attack of cystitis which yielded to medical treatment. Two or three weeks ago cystitis returned. One week ago had a slight fall followed in a few hours by a slight showing of blood in the vagina. Dr. Hirschfelder found a uterine tumor.

Status: Large stout woman, vaginal outlet very small. Uterus palpable above the pubis. Cervix high up. With much difficulty a curette was introduced into the womb and with it several pieces of soft tissue were removed.

On microscopical examination they proved to be necrotic and their structure was not to be made out. The fixity of the tumor, the bleeding follow-

ing the fall, the necrosis within the womb, strongly suggested malignancy.

February 8th, 1912.—Operation: Vagina and interior of cervix painted with tincture of iodine. Supra-pubic pan-hysterectomy performed. There was considerable bleeding from pelvic veins torn in separating attachments in the pelvis.

Microscopical diagnosis by Dr. Ophüls, spindle-celled sarcoma of the uterus.

Convalescence without incident. October 1st, patient continues perfectly well, no evidence of recurrence.

Discussion.

Dr. W. W. Beckett, Los Angeles: I have not very much to add. I believe that the frequency of sarcoma of the uterus is much more frequent than we realize, largely because of the difficulty of making the diagnosis clinically between sarcoma and carcinoma and the lack of making thorough microscopical examination of the tumors removed. I believe now that I have removed sarcomata of the uterus which I have supposed at the time were carcinomata. I am now keeping very close records of these cases. I have only had two cases of primary sarcoma of the uterus. The other cases I have had have been degeneration from fibroid tumors. In all of these cases I think we should do a total supra-pubic hysterectomy, the same as we would go into the axillary space for a malignant tumor of the breast. I do not believe it is possible to do as clean a vaginal operation as we can do suprapubically. If we make a large incision and put the patient well in the Trendelenberg position and dissect out all the glands and adnexa of the uterus we will cure many of our patients. I think by all means that we should go suprapubically in these cases, lay the abdomen well open and clear out the pelvic cavity as thoroughly as possible. I would also make a plea for early removal of fibroid tumors of the uterus, as many in time become malignant, and if we wait until they are clinically malignant it is too late to save our patient.

Doctor Rixford, closing discussion: I have very little to add to what has been said except that if the diagnosis of sarcoma of the womb has been made, the choice of route whether vaginal or supra-pubic for the hysterectomy is a matter of decision on the part of the surgeon for the particular case in hand. The usual indications for abdominal hysterectomy applying to malignant disease have little meaning here for these sarcomata do not form metastasis by way of the lymph stream so that there is no meaning in the decision to make a wide dissection of the neighboring lymph glands. If one metastasis is found one may be sure there are others in the body and that the patient is doomed. Vaginal hysterectomy would be less dangerous than an abdominal in cases of necrosis of the tumor with infection and this condition often obtains in these large sarcomata. In the case mentioned in which I gave the advice to the woman with the fibroid to wait until after her menopause who returned four weeks later with the tumor greatly enlarged, I removed the tumor suprapubically and found when the abdomen was opened a single metastasis on the free surface of the peritoneum. There was no enlargement whatever of the lymph glands in the neighborhood. A few weeks later many metastases were found in the scalp and in various parts of the body; one in the spinal canal caused intense suffering and probably was the immediate cause of death. The points I wish to emphasize particularly are the necessity of systematic and thorough histological examination of all fibroids removed by the surgeon and this by a competent pathologist; the "best friend of the surgeon" is not the peritoneum but a competent pathologist. I would urge the widening rather than a curtailment of the indications for the operative removal of fibroids, especially as the menopause approaches and would be very guarded in advising patients with fibroids to wait for the menopause.

RAILWAY SURGEONS HOOKWORM DISEASE, AND ITS IMPORTATION INTO CALIFORNIA.*

By JOHN W. COLBERT, M. D., Albuquerque, N. M.

Two years ago I presented a paper upon hookworm disease before this Society, but owing to the present-day importance of the subject I have considered that another presentation would not only be timely, but, in a measure, necessary to a proper appreciation of the future possibilities of the disease in your state.

Gentlemen, the hookworm situation in California to-day is alarming, and in spite of the rapid spread of the disease throughout the state within the past seven years, the situation thus far has received but scant attention, and the public, and to a large extent the medical profession of California, are not aware of the true state of affairs.

The fact that hookworm infection prevails to such a large extent in the southern states has a tendency to cause us western physicians to think of the hookworm as a distinctly southern problem, and the idea of the disease ever ravaging the fair state of California is apt to be dismissed by many of you men here to-day as an unfounded fancy. I may stand alone but, gentlemen, it is my firm belief that you in California will yet have the hookworm problem for solution, just as the South has it to-day. You may call me an "alarmist," and my statement a bold prophecy but, mark me, its fulfillment depends solely upon the attitude which will be adopted by your state and municipal health authorities within the next year or so. I hope this prophecy will not come true, for it is quite a different thing when it comes home to you, and you have to fight it at your own door, from when it is away off in Porto Rico, or in the southern states; but no longer can hookworm be considered a disease of the tropics or of our southern states. It is to-day a disease of universal distribution and threatens to become an international problem of serious proportions and is as much at home in California as in the southland.

Hookworm disease is not native to our soil. It is an imported disease, and its "import tax" has of a certainty been paid in blood—the purest Anglo-Saxon blood in America. The negroes, who came over from Africa in the slave-ships first brought the disease to American soil, and for many years it was confined entirely to the negroes. About a hundred years ago the disease began to develop among the whites in the southern part of our nation, and to-day over two million whites in our southern states harbor the parasite; and this parasite is responsible for lowering the working efficiency of these two million people; for establishing a death-rate higher than that of tuberculosis or typhoid fever or even yellow fever in its palmy days; for greatly retarding the agricultural and industrial, the social, political, and economical growth of the south; and for costing hundreds of millions of dollars to the country, until to-day the eradication of this little parasite is preeminently the problem of the south.

In Porto Rico, where this disease is more pronounced and more prevalent than in any spot on the globe, the parasite was also imported by the negro slave—but at a much earlier date, probably in the sixteenth century. For many years the disease was confined to the coast, where the negroes worked in the sugar mills, but later the coffee culture carried the negroes into the mountain regions and the disease gained a foothold all over the little island, until a few years ago ninety per cent. of the rural population, or eighty per cent. of the entire population of the island harbored the parasite.

And now—how about California? Seven years ago the disease was unheard of in your state. Early in 1905 Dr. Herbert Gunn of San Francisco called attention to the fact that a large number of Porto Ricans were settling in California, and that over fifty per cent. of them were hookworm carriers. Two years ago, at the annual meeting of this association I called attention to the fact that the disease was being brought into this state from Mexico by the track laborers employed by the Santa Fe and Southern Pacific Railway Companies. Just a few weeks later Passed Assistant Surgeon Glover of the U. S. Public Health and Marine Hospital Service found that the disease was also being brought into the state by Hindu laborers. Dr. Gunn investigated some of the gold mines in your state and found that the disease was endemic in practically all of the gold mines of California, and in some of the mines seventy-five per cent. of the men were infected. At the same time Dr. Gunn also called attention to the fact that the infection was present among agricultural laborers of the state. And only recently the Oriental and West Indian gardeners working within your city limits have been found heavily infected with hookworm. You may say: "Why be alarmed? these cases are only imported ones." True, the majority of your cases to-day are only imported ones. The same was true of the south a hundred years ago, and Porto Rico three or four hundred years ago.

I venture the prediction that an investigation of your Oriental gardeners of the Sacramento and San Joaquin valleys, of the laborers in the hop and grape vineyards, the beet fields, the fruit orchards, and of the men employed along the route of the Owens River aqueduct in the south; will prove further foci of hookworm infection. Taking all of these numerous foci of infection into consideration, I do not believe I overestimate it when I claim that there are to-day upwards of fifty thousand cases of hookworm disease in California. Over the greater part of your state conditions are ideal for the propagation of the hookworm—every bit as much so as in Porto Rico, or the southern states—and wherever such favorable conditions are found it is only a matter of introduction, and the parasite will thrive. You already have the introduction—from Mexico, from India, from China, from Japan, from the West Indies. The disease is easily imported and all races are susceptible to it. In fact it is almost impossible to keep from importing it. Bear in mind also that the long life of the embryo—from one to two years—makes its eradication

* Read before the Pacific Association of Railway Surgeons, San Francisco, 1912.

from the soil, when once introduced, a very difficult problem. The hope of eradicating hookworm disease in our southern states in this generation, has been abandoned and for the present the Rockefeller Sanitary Commission looks forward only to ameliorating it and to the educating of the next generation. In view of these facts, and in this day of preventive medicine, it certainly seems to me that measures should be taken—and taken at once—to control the spread of this disease. Unless you men in California are on your guard, long before Rockefeller's million has been spent in the south to eradicate this disease, it will be found to have gained a strong foothold in your fair state. I believe, gentlemen, that the time is ripe for a hookworm conference in your state, such as was held at Atlanta, Ga., two years ago, having for its object the prevention of hookworm importation, the enactment of proper regulations looking to the extermination of all known foci of infection, and the improvement of the sanitation of mines and railroad camps, for California is certainly confronted with a problem of momentous import, and one whose gravity should awaken the profession of the state to early action. The disease is very easily held in check by simple measures, if not allowed to gain too great a foothold, and it would be a disgrace to this community to permit the hookworm to become as prevalent in this beautiful state as it is to-day in the south. That the situation here to-day is serious is obvious, and the completion of the Panama Canal will doubtless increase the seriousness—therefore the time to act is now.

The practitioner of the West—especially the railroad surgeon—should always keep this disease in mind when dealing with imported labor.

SOME OBSERVATIONS ON SYMPTOMS AND TREATMENT OF SUPPURATIVE APPENDICITIS.*

By ROBERT T. LEGGE, M. D., McCloud, Calif.

Subject accepted for a paper before this society has been so often written about and discussed in the past two decades, that I venture to present it with an apology for its staleness.

When we consider, however, that more than one-half of our laparotomies are performed for appendicitis, I think you will appreciate that it behooves us to keep well in touch with the observations and experiences of our leading surgical clinics.

In country hospitals as well as in city charitable institutions, the surgeon encounters more suppurative appendicitis than he does in private practice; the reason being, of course, due to delays, improper diagnosis, procrastination and the so-called medical treatment of cases.

It has been my experience that many medical men place too much reliance upon the temperature, claiming that if not present or if not high, the pathology is of small importance.

This is a point of great importance and it should be taken into consideration as misleading, as often it is significant of great toxemia, low resisting

power, a well walled off purulent cavity or a recently ruptured one.

The pulse rate is a symptom of tremendous importance, and is likewise not given the attention which it demands. In the patient whose pulse rate is over 110, who has slight abdominal symptoms, with or without nausea for over thirty-six hours from onset beware of complications.

Where the pulse rate is 130 to 140 or more and the general symptoms have abated, the indication of a grave condition is present.

From a prognostic point of view, after a regular appendectomy or a drainage operation, when the pulse rate is high and does not moderate to a near normal one, there is a poor outlook for a recovery. In this condition also, watch for suppurative processes elsewhere; namely, portal infection, liver or subphrenic abscesses or a pleural empyema.

While it is true that the main symptoms, rigidity of the right recti muscles, pain in the right lower quadrant, nausea or vomiting with a history of indigestion or constipation gives us a diagnosis in acute appendicitis, the pulse rate and the laboratory examination of the blood are essential to determine a suppurative variety. As is also a history of an attack of forty-eight hours. A palpable tumor in a delayed case also makes a case clear.

The impulse which impelled me to write this paper was due to the observation of the use of proctoclysis in four cases of acute appendicitis that had been treated medically, and which were then referred to me for operation. These patients all had normal temperatures. Three had pulse rates ranging from 110 to 140. One had a normal pulse rate of 72. All had pain upon pressure over McBurney's region. Three some rigidity of recti muscle. Two had tympanites with ileus present. These patients gave an impression to their medical attendants of convalescing. The period then passed when operation was imperative, was upon the discovery of a mass at McBurney's point, or of tympanites with obstruction of the bowels, with or without fecal vomiting and with general diffuse peritonitis present. These four patients died in from one to nine days after a quick simple drainage incision was made, as all were abscess cases with low grade peritonitis.

My conclusions from these cases are that proctoclysis used to treat appendicitis before operation is absolutely contra indicated, that it masks symptoms whereby the medical man loses sight of the condition of his patient due to a false symptom of improvement, such as morphia given for the relief of pain produces.

The patient's resistance is gone, and consequently surgery and post operative treatment is of little avail. The reasons are plain as the lymphatics are waterlogged and blocked and thereby inactive and incapable to cope with the toxic suppurative mass. Proctoclysis should be only instituted as one of the holy trinity in post operative treatment. Murphy, 1912, reports 72 consecutive cases of general suppurative peritonitis from all causes, principally appendicitis, with only three fatalities, after a quick operation, and using the upright position, ab-

* Read before the Pacific Association of Railway Surgeons, San Francisco, 1912.

sence of food, and his famous saline drop method introduced per rectum.

Before Fowler introduced his method of sitting the patient in the upright position, and Ochsner and Murphy brought forth their ideas of starvation and salines per rectum the mortality was about 50% in suppurative cases following operation. To-day with the ideal treatment it is below 15%.

Fowler in *Journal A. M. A.*, Nov., 1911, gives some interesting statistics worth repetition. All this series were treated in the Fowler or sitting posture. In 194 cases operated on with diffuse septic peritonitis, he had a mortality of 27%. Eighty-three patients received fluids by mouth and anemas of saline, whereby 87% recovered. Thirty-nine patients were given fluids by mouth and no anemas, result, 76% recovered. Fifty-eight patients no fluids by mouth, and proctoclysis, 67% recovered. Nevertheless, as this great authority has had a lower series of recoveries in the last stated method, still it is the consensus of opinion, and the statistics of the leading surgeons of this country prove it to be the ideal method.

In my own series of cases the results have been a mortality of 15% in suppurative appendicitis.

Caution must be observed in over-indulgence in the use of rectal salines in advanced cases of suppurative peritonitis following appendicitis, or the patient's intestinal tract, either due to ileus or lack of absorption is likely to produce a reverse peristalsis, collapse and asphyxiation.

Where large quantities of saline are introduced the tissues and vessels of the intestines become engorged and cyanotic, creating an artificial ascites, edema of lungs, etc., as I witnessed demonstrated by Sloan on dogs at Crile's laboratory.

Proctoclysis as recommended by Murphy instituted directly after operation in suppurative peritonitis following appendicitis or other etiologically conditions is the crowning glory of post operative treatment; a surgical triumph which shall immortalize Murphy as a great American for all time to come. It is not advisable to be used, however, as a palliative measure in so-called medical treatment on account of the dangers I have already enumerated.

The operative technic in treating these patients which I consider ideal is as follows: After sterilizing the operative field with half strength tincture of iodine, I advise the McBurney's gridiron incision on account of its proximity to the appendix, and the lessened liability to ventral hernia later.

A point in diagnosis that is valuable to note, is that when an edematous condition in the tissues is found when making the incision, it gives evidence of a pus pocket beneath.

In incising the peritoneum as directed by Judd it is caught by two forceps, the finger should be pushed behind the folds to hold viscera back to prevent injury while the peritoneum is being opened.

It is well to keep wound toilet covered with saline pads to prevent infection of the tissues which are to be sutured later.

Search for the appendix and if it can easily be located, remove the same, inflicting the minimum

amount of manipulation, and perform as quickly as possible.

The diseased appendix should be removed whenever possible, so as to prevent it acting later as an infective agent, which would influence the formation of subphrenic abscess or other pus areas.

As speed is essential for success, the simple ligation of the appendix with its mesentery at its base is quite sufficient. Lemberging the stump is not practicable as the indurated and lymph covered tissues are too friable.

A split rubber tube reaching to stump allows ample drainage in small suppurative or localized pus cavities. If diffuse peritonitis is present an extra drainage tube should be inserted into the pelvis behind the bladder.

The intra abdominal tension forces and liberates the purulent secretions towards the incision in the abdominal wall, facilitating drainage.

The pads at incision are removed, tissues sponged with saline and then iodined. The wound is quickly sutured around drainage tubes, dressings applied and patient returned to bed and placed in the Fowler's position.

Proctoclysis should then be instituted for 48 hours and food withheld for the same length of time.

For the tympanites I have used physostigmine with considerable success. The bowels are moved by castor oil on the third day.

CONCLUSIONS.

1. Plea for early operations, no procrastination permissible.
2. In profound septic cases incision and drainage will suffice as operative means.
3. Proctoclysis only to be used in post operative treatment.
4. Ideal post operative treatment is Fowler's position, padlock on mouth and Murphy's proctoclysis.
5. Temperature is not a reliable guide.
6. The pulse rate is an important one not only in pre-operative diagnosis, but also in post-operative treatment and prognosis.

SOCIETY REPORTS

MONTEREY COUNTY.

The regular meeting of the Monterey County Medical Society was held on Saturday evening, February first, at the handsome new residence of Dr. A. M. Ritchie. Dr. T. C. Edwards, past president of the society, presided. The minutes of the previous meeting were read by Dr. M. T. Crabtree and the regular business of the meeting was transacted.

Dr. E. K. Abbott, of Monterey, presented a very interesting clinical case which was examined and discussed by the medicos, after which an elegant menu was served in the dining room. Two prettily decorated and well laden tables were presided over by the host and hostess. At the larger table were seated Drs. A. M. Ritchie, T. C. Edwards, H. T. Crabtree, William Himmelsbach, W. A. Lillie, E. K. Abbott, D. L. Deal, W. V. Grimes and Martin McAulay, while at another table presided over by Mrs. Ritchie were Drs. H. N. Yates, L. B. Graham and H. E. E. Douglass, with the following young ladies: Miss Guy and Misses Starkhouse.

A delightful season of social conviviality was

spent at the supper tables, and as the guests departed at the midnight hour they expressed their hearty thanks for the gracious hospitality extended by Dr. and Mrs. Ritchie.

SACRAMENTO COUNTY.

At a meeting of the Sacramento Society for Medical Improvement held on January 21st, the following officers were elected for the year 1913: G. L. Stevenson, President; F. E. Shaw, Secretary; G. L. Stevenson, F. E. Shaw, H. L. Nichols, G. A. White and W. A. Briggs, Directors; F. F. Gundrum, two years, G. C. Simmons, one year, and A. M. Henderson, one year, Delegates to State Medical Society; S. E. Simmons, W. E. Briggs and J. W. James, Alternate Delegates to State Medical Society.

EUGENE H. PITTS, Secretary.

PROCEEDINGS OF THE SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Section on Medicine, January 7, 1913.

1. Demonstration of the Killian Suspension Laryngoscopy, Dr. Henry Horn.
2. Döhle's Cellular Inclusions in Scarlet Fever, Dr. W. T. Cummins.

General Meeting, January 14, 1913.

1. Evolution in the Study of the Heart; a Survey, Dr. H. I. Wiel.
2. Notes on the Anatomy and Physiology of the Heart, Dr. J. B. Frankenheimer. (To be published in California State Journal of Medicine.) Discussed by Drs. W. W. Kerr, H. D'Arcy Power, H. I. Wiel and H. W. Allen.
3. Auricular Fibrillation, Dr. H. W. Allen. Discussed by Drs. W. W. Kerr, H. D'Arcy Power, H. I. Wiel and H. W. Allen.

Section on Surgery, January 21, 1913.

1. A Case of Hematomyelia, Dr. H. B. Reynolds, Palo Alto.
2. Successful Removal of Intraspinous Tumor, Drs. Harry Sherman and Leo Newmark. (To be published in California State Journal of Medicine.) Discussed by Drs. M. B. Lennon, L. Eloesser, H. Sherman and H. Reynolds.
3. Spasmodic Torticollis; with Notes on the Etiology of Two Cases, Dr. Walter F. Schaller. Discussed by Drs. M. B. Lennon, S. T. Pope, C. B. Macdonald, H. C. McClenahan, L. Eloesser and W. F. Schaller.

Section on Eye, Ear, Nose and Throat, January 28, 1913.

1. Demonstration of Cases, Dr. Cullen Welty.
2. Demonstration of Case of Central Retinal Changes, Dr. M. W. Fredrick. Discussed by Drs. S. J. Hunkin, A. S. Green, L. W. Allen, C. F. Welty and M. W. Fredrick.
3. Review of Italian Special Literature. Dr. Victor Lucchetti. (To be published in California State Journal of Medicine.)

SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held at 8:30 p. m. January 31st at the Dameron Hospital. In the absence of President W. J. Young, Dr. Sanderson acted as president. The following members were present: Drs. J. J. Tully, J. D. Dameron, R. B. Knight, S. E. Latta, H. E. Sanderson, H. Smythe, F. P. Clark, D. F. Ray, I. S. Zeimer, Mary Taylor, Minerva Goodman, C. F. English, B. J. Powell, W. Walker, S. B. Swift, B. F. Surryhne, of Modesto; R. K. Barry, of Turlock; S. E. D. Pinniger, of Tracy; A. M. Tower, of Lodi; J. E. Nelson, of Lodi; J. O. Chiappella, of Ripon; C. W. Evans, of Modesto, and R. T. McGurk. Dr. Emil Schmoll of San Francisco was also present and presented one of the papers of the evening.

The minutes of the last meeting were read and approved. The secretary read a copy of the letter sent to five legislators from this and nearby dis-

tricts advising them to support the State Board of Medical Examiners in their efforts to keep up the standard of medical efficiency in this state. Dr. Surryhne moved that the action of the secretary be approved by the society. The motion was seconded by Dr. Clark and carried. The subject of legislation was freely discussed by several of the members and some good ideas were brought out in regard to the state medical examinations.

The committee on admissions reported favorably on the following names and they were declared elected as members of the society: Drs. R. K. Barry, of Turlock; E. R. Brooks, of Riverbank; S. B. Swift and C. F. English, of Stockton.

A paper on "Pancreatitis" was then presented by Dr. Dameron. The subject is an interesting one and keen interest was exhibited by all present. Several valuable and practical points were brought out by Dr. Dameron, which gave stimulus to the discussion which followed. Dr. Dameron's paper was followed by a paper on the same subject by Dr. Emil Schmoll of San Francisco. He gave some valuable points on the differential diagnosis of pancreatitis, and by frequent reference to the pathological and chemical tests made in completing diagnoses, unconsciously emphasized the fact well known to Stockton practitioners, that we need a competent pathologist in this city. Dr. Schmoll being an internist, emphasized the medical viewpoint of pancreatitis. Drs. Evans and Knight followed with further reports of cases and discussion of pancreatitis.

There being no further business, the society adjourned to the dining-room, where a sumptuous repast awaited the members.

R. T. MCGURK, Secretary.

SANTA CRUZ COUNTY.

At the meeting of Santa Cruz County Medical Society held January 13, 1913, in Santa Cruz, the following officers were elected for the year 1913: President, A. F. Cowden; First Vice-President, H. G. Watters; Second Vice-President, F. Hart; Secretary-Treasurer, G. P. Tolman; Delegate to State Convention, P. T. Phillips; Alternate, B. H. Bush; Censor for three years, E. E. Porter. Many matters of importance were discussed and acted on. A new fee bill was adopted. Refreshments.

G. P. Tolman, Secretary.

FEE BILL.

Adopted by the Santa Cruz County Medical Society, January 13, 1913.

Prescription or advice, at office.....	\$ 1.50
General examination, at office (including urinalysis or blood examination).....	5.00
Gynecological examination or treatment.....	2.50
Venereal treatments	2.50
Vaccination	2.00
Day visits in town.....	2.50
Day visits, country, add to town fee, per mile	1.00
Night visits, in town (10 a. m. to 7 a. m.)...	5.00
Each additional patient in same family, extra	1.50
Consultation, each physician (consultant to be paid at time of consultation).....	10.00
Attendance on diphtheria, scarlet fever, smallpox, etc.	5.00
Anesthesia	5.00 to 20.00
Post mortem examination.....	25.00
Assistant at operation, 10 per cent. of fee.	
Minimum fee	10.00
Minor operations requiring general anesthetic	25.00
Tonsils and adenoids removed.....	50.00
Either one separately	25.00
Major operations, not less than.....	250.00
Ordinary confinement	25.00
Instrumental delivery	50.00 up
Urinanalysis	5.00

SANTA BARBARA COUNTY.

The Santa Barbara County Medical Society met in regular session last Monday, February 10, 1913, at the Arlington Hotel. Present: Drs. Bakewell, Barry, R. Brown, Low, Wells, C. S. Stoddard.

The subjects discussed were Tonsillar Anatomy and the Lingual Tonsil. The importance of the tonsillar bodies, as many diseases of the lungs and glandular system may have their origin in the tonsil. They also discussed the peculiar types of la grippe prevalent this season. A letter was read from the State Secretary, in which he spoke of visiting our Society some time during the spring or summer; this was heartily endorsed by the members present. The Society adjourned to meet at the same hotel in March. The regular meeting will probably be preceded by a social dinner at the hotel.

The annual meeting for election of officers was recently held at the residence of Dr. Rexwald Brown and with the following results:

President, Dr. T. Albion Stoddard, Santa Barbara; Vice-President, Dr. Samuel P. Low, Santa Barbara; Vice-President at Large, Dr. Lambert B. Coblenz, Santa Maria; Secretary-Treasurer, Dr. William T. Barry, Santa Barbara; Delegate (hold over), Dr. David A. Conrad, Santa Barbara.

President Dr. T. A. Stoddard named the following committees for 1913 (first named in each case being chairman of committee): Program and Scientific Work—Drs. W. T. Barry, R. Brown, Geo. S. Wells; Censors—Drs. C. S. Stoddard, B. Bakewell, W. B. Cunnane; Public Health and Legislation—Drs. R. Brown, D. A. Conrad, W. T. Barry; Auditing Committee—Drs. B. Bakewell, S. P. Low, H. Sidebotham.

The monthly meetings will be taken up with due regularity and rigor. The members are confident of good results, and are specially desirous of visits from fellow members in other counties.

WILLIAM T. BARRY, Secretary.

YOLO COUNTY.

On Tuesday evening, February 4th, Dr. and Mrs. Fred R. Fairchild entertained the medical society in a very charming manner at their own home. The doctor read a paper on "Diagnoses of Atypical Appendicular Troubles" which was much appreciated and followed by discussion by the members.

FRANCES LOUISE NEWTON,
Secretary.

CALIFORNIA ACADEMY OF MEDICINE.

At the regular meeting of the Academy on January 27th, the following scientific program was given:

1. Word Values—A Suggestion, Harry Sherman. Discussed by L. Eloesser, W. I. Terry, D. Tait, J. T. Watkins, G. E. Ebricht, R. Russ, M. L. Emerson and H. Sherman.

2. Intratracheal Insufflation Anesthesia, Saxton Pope. Discussed by W. I. Terry, D. Tait, L. W. Allen, M. Kavanagh, R. Russ, E. Williams, L. Eloesser and S. Pope.

Refreshments were served at the close of the meeting.

COOPER CLINICAL SOCIETY.

A meeting of the Cooper Clinical Society was held on the evening of Monday, February 3d, at the Medical Department of Stanford University. The following program was given:

1. Presentation of Case of Polycythemia, Dr. W. W. Boardman. Discussed by Drs. Thomas Addis, W. F. Cheney, M. Abrahamson, Harry E. Alderson, and W. W. Boardman.

2. Case of Reynaud's Disease, Dr. L. S. Mace. Discussed by Drs. H. C. McClenahan, W. F. Schaller and L. S. Mace.

3. Abscess of Liver, Dr. Lovell Langstroth.

Discussed by Drs. Stanley Stillman, E. C. Dickson, R. L. Wilbur, H. R. Oliver, S. O. Beasley, L. Eloesser and E. D. Downing.

4. Primary Carcinoma of Liver, Dr. P. H. Luttrell; Diabète Bronzé, Dr. Thomas Addis; with presentation of specimens. Discussed by Drs. Stanley Stillman, W. Ophuls, W. F. Cheney, T. Addis, E. C. Dickson, E. D. Downing and P. H. Luttrell.

Refreshments were served at the close of the meeting.

POPULAR LECTURES.

Thirty-first course of Popular Medical Lectures in Lane Hall, north side of Sacramento street, near Webster, on alternate Friday evenings at eight o'clock sharp.

Program.

March 7, 1913—Dr. L. Eloesser, "Grafts and Transplantations of Human Tissue."

March 21, 1913—Capt. Jas. L. Bovans, U. S. Army, "The Work of the Medical Department of the U. S. Army on the Firing Line." (Illustrated.)

April 4, 1913—Dr. H. E. Alderson, "Some Skin Diseases We Need Not Have." (Illustrated.)

April 18, 1913—Dr. R. G. Brodrick, Health Officer of San Francisco, "The Work and Aims of Our Health Department." (Illustrated.)

MEMBERSHIP OF COUNTY SOCIETIES.

	1906	1912
Alameda	121	216
Butte	14	22
Contra Costa	21	20
Fresno	56	63
Humboldt	35	33
Kern	12	22
Kings	6
Los Angeles	348	600
Marin	14	16
Mendocino	12	8
Merced	10
Monterey	23	20
Napa	18	19
Orange	24	31
Placer	20	25
Riverside	21	30
Sacramento	55	70
San Benito	9	3
San Bernardino	35	37
San Diego	39	85
San Francisco	540	554
San Joaquin	41	69
San Luis Obispo	11	14
San Mateo	7	16
Santa Barbara	28	21
Santa Clara	88	83
Santa Cruz	21	26
Shasta	30	30
Solano	19	8
Sonoma	48	47
Tehama	9	8
Tulare	26
Tuolumne	13	8
Ventura	12	10
Yolo	17	17
Yuba-Sutter	10	11
	1777	2278

AUDIT OF THE BUSINESS OF THE SOCIETY FOR 1912 AND A GENERAL ANALYSIS OF THE BUSINESS FOR THE PAST SEVEN YEARS.

In order that the members of the Society, and particularly the delegates, may be informed as to the condition of the affairs of the Society in advance of the annual meeting at Oakland in April, the following statement has been prepared for publication in the JOURNAL. Prior to 1905 the accounts were kept from an indeterminate date in April of one year to a similar date in April of the next year; and furthermore, they were not audited by a regular accountant. All of these old accounts were destroyed in the fire of 1906 excepting a memorandum of receipts from the JOURNAL advertising.

At the meeting of 1905, on the recommendation of the Secretary, Dr. Jones, the fiscal year was changed to correspond with the calendar year, all books and accounts were ordered closed December 31st of each year and a certified public accountant was authorized to audit the accounts in place of the old auditing committee consisting of members who generally had little skill as auditors. All the auditor's reports from and including 1906 were saved, and it is therefore possible to present an analysis of the affairs of the Society for seven years, from 1906 to 1912, inclusive.

We first present for your consideration the report of the auditor for 1912. The most noticeable thing in the report is the very large increase in "Society or General Expense"; under this heading the cost of legal work in conducting our Medical Defense is included, and as has been pointed out in the JOURNAL several times, the volume of that work increased very greatly in 1912 and promises to increase still further in 1913. Full details in regard to this item will be presented to the delegates, but for obvious business reasons will not be published. There will also be noticed a decided increase in the receipts from JOURNAL advertising; this increase is in no small part due to the energetic work of the Chairman of the Advertising Committee, Dr. R. E. Bering.

It will be seen that in spite of the fact that our earnings increased \$1,522.16 over the previous year, 1911, our expenses, mostly for legal work, increased more rapidly and our cash reserve was decreased by \$281.72.

San Francisco, Cal., Jan. 15th, 1913.
Medical Society of the State of California,
San Francisco, Calif.

Gentlemen: We have audited the accounts of the Medical Society of the State of California for the year 1912, and we annex hereto analysis of Cash Receipts and Cash Disbursements for the year, showing totals by months.

The balance with the Union Trust Co. of San Francisco at Dec. 31st, 1912, amounting to \$1558.15, has been verified. The volume of bank transactions for the year was as follows:

Jan. 1st, 1912.—Balance.....	\$ 1,839.87
Deposited during 1912 per statement of	
Cash Receipts.....	17,241.19
	<u>\$19,081.06</u>

Less Checks drawn during 1912 per statement	
Cash Disbursements.....	17,522.91

Dec. 31st, 1912. Balance in Bank.....	<u>\$ 1,558.15</u>
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The statement of the Union Trust Co. of San Francisco shows a balance as at Dec. 31st, 1912, according to their books of

\$1820.15

From this must be deducted, Checks

unpaid at Dec. 31st, 1912:

No. 1183.....	\$222.00	
No. 1184.....	40.00	262.00

Balance	<u>\$1558.15</u>
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which agrees with the foregoing figures.

Summary of Accounts for 1912.

Receipts.

County Societies.....	\$ 6970.00
Subs. to Journal.....	2391.80
Sales of Register.....	149.40
Ads. in Register.....	1050.85
Ads. in Journal.....	6299.05
Rent	180.00
Miscellaneous	200.09
Excess Disbts.....	281.72

\$17522.91

Disbursements.

Journal expenses.....	\$ 4647.12
Register expenses.....	1140.57
Society or Gen'l Ex.....	993.92
Society or Gen'l Ex.....	3242.87
Salaries	6650.00
Office expense.....	671.38
Furniture	31.05
Miscellaneous	146.00

\$17522.91

The financial position of the Society as at December 31st, 1912, was as follows:

ASSETS.

Cash.

Union Trust Co.....	\$1558.15
On hand.....	200.00
	<u>\$1758.15</u>

Accounts Receivable.

Journal Advertising.....	\$356.67
Register Advertising.....	278.50
Furniture and Fixtures.....	635.17
	<u>750.00</u>

\$3143.32

LIABILITIES.

Accounts Payable.

Rynerson Distributing Co.....	\$20.62
The James H. Barry Co.....	36.00
Stratton, Kaufman & Torchiana.....	80.95
	<u>\$ 137.57</u>

Net Assets.....	<u>\$3005.75</u>
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We are, gentlemen,

Yours very truly,

McLAREN, GOODE & Co.,

Certified Public Accountants.

SUMMARY OF ALL BUSINESS TO THE END OF 1912.

JOURNAL. As already mentioned, the only figures relating to the JOURNAL prior to 1906 are the receipts. In 1907 a considerable sum was paid on advertising commissions which should have been paid in 1906, so the expenses for that year are unduly large. In 1911 the size of the JOURNAL was increased and again in 1912, which fact, together with some other miscellaneous improvements, raised the cost. There is a little irregularity in the figures of the early years, for in some

years the subscriptions to the JOURNAL were included with receipts from advertising; the general amounts, however, may be considered accurate. No credit of subscriptions from members and no charge for rent, office, salaries, etc., are included.

Year	Journal Advertising	Journal Expense	Journal Profits
1903	\$1461.19		
1904	4017.28		
1905	5907.04		
1906	5454.70	\$3706.08	\$1748.62
1907	5880.02	4863.82	1016.20
1908	4552.14	3670.52	881.62
1909	4429.21	3667.00	762.21
1910	4764.51	3250.44	1514.07
1911	5598.99	4147.86	1451.13
1912	6299.05	4647.12	1651.93

\$9025.78

Register. From 1906 to 1909 the Register and Directory was published under contract with the Society by an outside party and the Society neither made nor lost money on it nor did the figures relating to it pass through our books. In 1910 the publication of the Register was again taken into our hands. The receipts and expenses for the three years will be found below. If the book can be made to pay for the paper and printing of it, we feel that we should be satisfied. The edition for 1910 shows a loss of \$152.95, which is accounted for by the cost of the legal work in defending the Society's copyright to the book. The two succeeding years, taken together, show a loss of \$1, which is quite satisfactory.

Year	Receipts	Expenses
1910	\$1273.00	\$1425.95
1911	1060.90	1121.58
1912	1200.25	1140.57

Total Receipts and Expenses. The following table sets forth the total receipts and expenses of all sorts for the eight years preceding and including 1912 and a few words of historical explanation may not be out of place. In 1905 we borrowed \$2000 at 6% for three years; this was used in the same year to take up our floating debt and enable us to pay cash for our supplies and get better rates and discounts which, altogether, effected a saving of more than 20%. In 1909 this note was taken up by issuing 20, one hundred dollar notes which, in turn, were taken up in 1910 and 1911, being paid for out of our regular income. In 1910 an additional assessment of \$1 per member per year for three years, ending 1912, was voted; this was for the purpose of taking care of the cost of our Medical Defense. The cost of this work more than doubled in 1912 and, as already mentioned, promises to be very much greater in 1913. It is the large increase in this one item of expense that accounts for our loss in 1912 which occurred in spite of the large increase in receipts for that year.

All of our accounts, vouchers, canceled checks, etc., since May, 1905, are intact and in the safe deposit; they have all been audited each year by certified public accountants who are responsible for the accuracy of their audit. In this statement we have not gone into many burdensome details, but it may be said that no matter of expense has been undertaken without consideration and sanction by the Council and that not a dollar of money has

been paid out until after the charge has been investigated and approved in writing by the auditing committee of the Council.

Year	Receipts	Expenses	Gain	Loss
1905	\$ 8,791.34	\$ 8,524.40	\$ 266.94	
1906	10,634.99	11,085.55		\$ 450.56
1907	11,745.23	11,311.05	434.18	
1908	10,238.94	10,669.68		430.74
1909	12,670.01	12,084.06	585.95	
1910	14,147.27	13,919.13	228.14	
1911	15,719.03	14,241.13	1,477.90	
1912	17,241.19	17,522.91		281.72
Totals	\$101,188.00	\$99,357.91	\$2,993.11	\$1,163.02
Net gain 8 yrs.			\$1830.09	
Plus Loans repaid, 1910			2000.00	

\$3830.09

C. G. KENYON, PHILIP MILLS JONES,
Chairman of the Council. Secretary.

BOOK REVIEWS

Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. December, 1912. Vol. I, No. 6. Published by W. B. Saunders Co., Philadelphia and London.

Contents: Carcinoma of the Breast (with a talk by Prof. R. Bastianelli, of Rome, Italy); Improvements in the Treatment of Malignant Tumors with Radio-active Substances (by Albert Caan, M. D.); Salpingitis—Pelvic Infection; Metastatic Gonorrheal Arthritis of the Knee; Ankylosis of Elbow—Arthroplasty; Fracture of the Patella; Ununited Fracture of Femur; Fracture of the Internal Semilunar Cartilage; Splitting Fracture of the Anterior Half of the Lower End of the Tibia; Ununited Fracture of the Humerus; Tenoplasty for Obstetric Palsy; Ankylosis of the Temporomaxillary Joints; Comment on Cases Previously Operated On; Index to Volume I.

Golden Rule of Surgery. By A. C. Bernays, 2d Edition, revised by W. T. Coughlin. Octavo, cloth, pp. 280. C. V. Mosby Co., St. Louis, publishers.

A collection of surgical maxims, most of them incontestably true, many of them helpful. The book seems to be of use; the preface says a large first edition was exhausted. It is difficult to see, however, just what class of readers would be benefited by such a collection of short apodictical statements. Students would certainly not—the book gives neither why nor wherefore, nor does it present any problems for solution. The surgeon would not find much in it to aid him. The general practitioner, internes and surgical beginners might turn to these maxims before undertaking the care of a surgical case and find reminders here of facts they should have known before.

Some of the statements are very dogmatic—why for instance the use of digitalis and morphine is disparaged on the ground that they are "poisons" while the use of adrenalin is recommended is difficult to understand. L. E.

The Surgical Diseases of Children, by Wm. Francis Campbell, A. B., M. D., and Le Grand Kerr, M. D. Published by D. Appleton & Co., 1912.

This book is dedicated to the family physician, upon whose conscientious care and devotion to human welfare depends the efficiency of future men and women.

Under the section of General Considerations come some of the best ideas in the book. It deals with the expression of disease in a child; the examination; history taking; securing the child's confidence; general posture; the gait; pain; surgical significance of pain in all its expressions; its oc-

currence in different functions; its manifold character and its interpretation. This part of the work is particularly well developed and of great practical service. It tells what usually is only learned through the finer understanding and study of child life in its morbid state, and upon which depends the successful comprehension of their peculiar expressions of disease.

The chapters which follow, taking up the subjects of special examination, methods of procedure, preparation for operation, anesthetics, shock, sleep, feeding, etc., all are to the point and useful. The remainder of the book, some 600 pages, is devoted to those diseases of children which in any way might be considered surgical. The attitude of the writers is commendable in that everywhere the discovery of disease amid its vari-colored symptoms and dissembling phases is the dominant theme, their treatment in major cases is more suggestive than explicit. But this is as it should be in a work of this kind. It does not shirk detail where this might be directly the concern of the family physician. Its careful delineation of the proper treatment of orthopedic cases is excellent and concise.

It is not considered good taste to pass a book in review without dragging forth its short-comings showing its lack of progressive accuracy, picking out its typographical errors and differing with its conclusion; but in the present volume, possibly this will be pardoned because of the exceptionally good performance of the authors—in fact, we may even part with the compliment that the index and illustrations are very good.

S. T. P.

Pathfinder in Medicine, by Victor Robinson. Published by Medical Review of Reviews, New York, 1912.

This addition to biographical literature consists of a series of fifteen essays, each essay devoted to a phase of historical development of the medical sciences as exemplified by the work of one man. The essays are arranged in chronological order, beginning with "Galen and Greek Medicine," passing next to "Aretaeus, the Forgotten Physician," "Paracelsus, Iconoclast of Medicine," "Servetus, the Medical Martyr," then Vesalius, Pare, Scheele and Cavendish, the chemists, John Hunter, Jenner, Laennec, Simpson, Semmelweis, Schleid and Schwann, and finally "Darwin, Saint of Science."

The author could not attempt within the limits of the work to accord each biography more than the salient facts, but with remarkable ingenuity he has managed to present much without cramming the subject matter. The method of treatment is as unusual as it is entertaining, due partly to the author's combined gift of imagination and versatility. Frequent allusions, occasional digressions and humorous sallies, always in good taste, convey a certain buoyancy to the text and hold the reader's interest. In places the author actually soars aloft in the realms of poetic fancy, imparting a delightful charm to his imagery. The introduction to the life of Servetus reads like a page from a Spanish romance. The account of Vesalius commences with some poetic reflections upon night and darkness, then:

"Alas! that some should wish the night to cover deeds that daylight must not see. Hark, why are the footsteps of that fellow as silent as his shadow? If he had the wings of the bat he could not sail more noiselessly through the air. The furred cat could learn from him the soundless tread. To the end of the town he walks, and e'en when the watchful dogs bark aloud he is as quiet as the swinging carcass of the convict that hangs moldering on the gibbet. Ah! save us, Virgin Mary, for thither is he bound. Stealthily he climbs the slippery steps and steals the corpse. (The moon looks calmly at his pale face.) Oh, ye blessed saints, protect us from his evil eye—it is the same youth

that last week robbed the charnel house and dug the dead from their graves!"

Thus by the use of high color in description and a feeling of warm human though critical sympathy with the past, Robinson has been able to lend a vividness of portrayal that imparts life to his characters. One seems to lose the compelling sense of time and live again with them.

As readers' tastes differ, it would be difficult to decide which is the best of the essays. They are all excellent. Abraham Jacobi states in the introduction that "the facts as related are absolutely correct." What unfavorable criticism might be offered would detract but little from the general worth of the book. One can read it with a sustained and alluring interest from cover to cover and feel on completing it that much information presented in an engaging and original literary style had been derived from its pages.

M. S.

A Manual of Personal Hygiene. Edited by Walter L. Pyle, A. M., M. D. Published by W. B. Saunders & Co., Philadelphia & London, 1912. Fifth Edition.

While the trained man requires no such compendium as this popular little work in his library, there is a distinct and large field of usefulness for just such a clear, concise and simple reference book. In such language as is easily understood by the educated laity the rudiments of the anatomy and essential physiology of the organs discussed are set forth. Succeeding there is a fairly comprehensive discussion of the methods and procedures for the preservation of these organs at their normal efficiency. The field covered includes: The digestive apparatus; skin and appendages; vocal and respiratory apparatus; the ear; the eye; brain and nervous system. The chapter on physical exercise takes up muscle and muscle-nerve physiology and gives most of the simpler, approved forms of gymnastics and athletics. Orthopedics is the keynote of Dr. Goldthwaite's chapter on body posture. Domestic hygiene covers very adequately the institution and maintenance of the physical surroundings necessitated by our community existence. Dr. Wiley is represented by a chapter on Food Adulteration and Deterioration, which includes simple methods of caring for foods and detecting changes due to adulteration and deterioration. A chapter entitled Appendix concerns itself with pulse, temperature, respiration, baths of all kinds, massage, emergency treatment in cases of poisoning and other accidents. It is an admirable book for nurses, teachers, sociological workers, etc., and also is a decidedly more reliable household vade mecum than the legion of so-called "doctor's books" that flaunt their misinformation from the book shelves of the laity. And, again, for those of us who are not gifted with the ability of a Woods Hutchinson to impart to the laity complex medical information in a "words-of-one-syllable" style, this book may often be of great assistance to explain or answer the thousand and one questions that the patient is capable of hurling at his omniscient medical attendant.

G. H. T.

DR. J. S. POTTS.

Died February 9, 1913.

The following, in appreciation of Dr. Potts, has been contributed by "a friend":

"One by one we pass over the bar, leaving our footsteps upon the sands of time. When we leave such footprints behind us as our old friend and physician, Dr. J. S. Potts, has left, we can depart in peace. His hands, his purse, his skill, were always at the service of the needy. He had a kindly welcome for the stranger, a cheering word for the unhappily, and to one and all a helpful hand. A rarely generous man to his friends—and not only to his friends, but to the community in which he

lived—he was always ready to give of his time and money for the public good.

"He was one of the originators of the board of trade in San Jose; also one of the first to see the benefit a first-class hotel would be to this community and it was his money and energy that was so helpful in establishing Hotel Vendome in San Jose. As president of the Hotel Vendome company, he was assiduous in making the new venture a success.

"In 1880 he visited Europe, spending much time in the study of his profession in the best hospitals of Edinburgh, London, Dublin, Paris, Berlin and Vienna. Returning to San Jose as his chosen home, he was for many years the leading physician here.

"There are many hearts in San Jose to mourn the loss of so good a friend."—San Jose Mercury.

AN APPRECIATION.

We have known him and truly we have loved him; now we reverence his memory. The medical profession of the world honors him for his unusual and brilliant understanding of the wonder-workings of the heart in health and in disease. We are proud of this. We honor him for his subtle understanding of humanity; his spending of



Dr. George Alexander Gibson.

strength for our good; his consideration; his courteous urbanity; his deep devotion to all the virtues of our profession; his open sincerity, and for his stainless reputation.

His charity and his learning have brought him "such strong renown as time will ne'er decay."

WILLIAM WATT KERR,
CHARLES MINER COOPER,
JAMES EAVES,
THOMAS ADDIS,
J. WILSON SHIELS.

NEWS NOTES FROM NEWSPAPERS.

Fresno is to have another hospital to be built by Dr. Sample.

Auburn is to have a sanitarium to be built by Mrs. Nellie Firth.

At Grass Valley, trichinosis has made its appearance in an Italian family.

Chico had a number of cases of smallpox during the early part of February.

Dr. W. E. Coppedge has been appointed county health officer of Modoc county.

Monrovia has appointed Dr. A. Hostetter health officer to succeed Dr. C. D. Gaylord.

Dr. R. B. Knight, of Stockton, has been appointed on the lunacy board to succeed Dr. J. P. Hull.

At San Jose, Dr. George H. Evans gave an address on the subject of tuberculosis on February 1.

Bakersfield was treated to a lecture on foods and poisons by Dr. Wm. Ophuls in the latter part of January.

The German hospital, San Francisco, has been sued for \$25,000 because of the death of a boy from rabies.

Sonoma county hospital admitted 355 patients during the past year and cared for them at a cost of \$31,777.96.

Dr. George W. Burk of Sisson was acquitted of the charge of violating the quarantine regulations after a jury trial.

At San Jose, Dr. D. R. Wilson has been appointed superintendent of the county hospital, to succeed Dr. Jonas Clark.

Another cure for cancer has been discovered. This time it has St. Ignatius College, San Francisco, as its habitat.

Oakland supervisors—or rather, Alameda county supervisors—have allotted one million dollars for the new county infirmary.

The new building of the Pomona Valley Hospital Association was recently started and the cornerstone was laid February 7.

Dr. M. R. Glover, of the Public Health Service, has gone to Tulare county to investigate the reported epidemic of trachoma.

Pasadena has a school dental clinic for caring for the teeth of its poor children that has proved to be of the greatest benefit.

In Colorado the legislature would compel any surgeon who takes out an appendix to prove that it is diseased or suffer a penalty.

Dr. Samuel Weiss was sentenced to four months in jail and a fine of \$100 for sending an indecent letter to an actress at a cheap theatre.

O. C. Joslen tried for two years or more to compel the Board of Medical Examiners to restore his license, but finally the court threw it out.

Dr. Minerva Goodman, medical inspector in the Stockton schools, reports that about 90 per cent. of the pupils have teeth that need attention.

Dr. W. K. Sanborn had to have his leg amputated as a result of an injury received while playing football, according to the Oakland Tribune.

Dr. E. G. Goodrich, not a member of the State Society, was the victim of a \$3,000 verdict in a suit against him for alleged malpractice, January 31.

Berkeley's city auditor was one of the smallpox victims and his office was closed and vaccinated; nearly all the city officials were also vaccinated.

San Diego County Medical Society had its annual dinner on January 16th and the older resident physicians recited their hard luck stories of early days.

Fresno county has appointed Dr. Guy Manson health officer, to take the place of Dr. T. N. Sample, resigned, who has held the office for eight years.

Dr. R. B. Dempsey delivered a lecture on tuberculosis at Vallejo, under the auspices of the brotherhood of the Presbyterian church, on February 4.

The Fresno county hospital is to adopt some of the suggestions made by the County Medical So-

ciety; this is excellent and all counties should do the same thing.

The Good Samaritan Association has purchased the Columbia hospital, at Los Angeles, and thus enlarged its usefulness materially. It is an Episcopalian institution.

Dr. Mays, of Sausalito, formerly and for several years a councillor of the State Society, was operated on for appendicitis and for some trouble with his knee on February 6.

Dr. Madeline E. Johns, San Francisco, was murderously attacked by an angry janitor of the Head building, where she has offices, and was almost killed. The man committed suicide.

Dr. I. D. Webster has been appointed county health officer of San Diego, and the County Medical Society will cooperate with him in furnishing medical attendance at the county hospital; a good move.

On January 31st there were 862 patients in the Los Angeles county hospital, and it is stated that within a year the new hospital building will be inadequate to accommodate the patients that will have to be cared for.

In Washington a court has ruled that a corporation has no right to practice medicine and therefore is unable to collect a bill for medical services. It was a case where "Dr. Cook & Co." has sued some poor unfortunate.

Mr. H. T. Morrow, of Los Angeles, made an address before the Commonwealth Club of San Francisco, on February 15, on the subject of proposed medical legislation and the danger of reducing standards of required education.

It is said that a Dr. Klemperer has recovered a strain of the live tubercle bacilli used by Friedmann in his "cure" and has grown them successfully. He extracted some from a patient shortly after Friedmann had injected them.

At Salinas the Jim Bardin hospital has been reopened, but Mr. Bardin states that he will no longer run it at a loss, and that if the doctors do not send enough patients there to keep it on a self-paying basis he will close it up for good and all.

The bill requiring a medical certificate before a marriage license is issued is creating a good deal of discussion at Sacramento and the newspapers comment upon the frankness of the language used; it would be well if the papers would be as frank.

Berkeley has had a few more cases of smallpox, but the epidemic seems to have been stopped; a couple of hundred persons are being vaccinated daily by the health authorities. All the school teachers in Oakland and Berkeley have been vaccinated.

An outrageous suit has been filed against Dr. E. R. Bryant, San Francisco, because he did not respond to a call to attend a former patient when he himself was ill. This would look like plain blackmail and of course he will win the suit if it is ever tried.

AN ENCOURAGING CASE.

In the Superior Court of the State of California,
in and for the County of Alameda.

Department No. 5.

Before Hon. William S. Wells, Judge.

THE PEOPLE OF THE STATE
OF CALIFORNIA,

Plaintiff,

vs.

No. 5343.

C. HILLERY YOUNG,

Defendant.

Oakland, Cal., Tuesday, January 21, 1913.

Proceedings.

The Court: The People against C. Hillery Young.

Mr. Wright (Assistant Probation Officer): This

matter was referred to the Probation Officer, your Honor, and the report has been prepared, and copies given. The defendant has read it, and I would ask him if there are mistakes.

The Defendant: I didn't notice any.

Mr. Wright: I will state, your Honor, that there were, as the report shows, fifty or sixty letters received, and many letters speaking very highly of this treatment, but I didn't quote all those letters in the report; I just quoted one or two, and made the general statement that the balance of them spoke highly of the treatment.

The Court: Didn't I see the special prosecutor for the Medical Board here a few minutes ago?

Mr. Smith (Deputy District Attorney): Yes, your Honor.

The Court: I would like him to come into court; I would like to ask him some questions.

Mr. Smith: There is one mistake in this report. It stated that the defendant plead guilty to felony. It is a misdemeanor; he did not plead guilty to felony.

Mr. Van Hovenberg (representing the defendant): I presume the Court is aware of the fact that the court in Berkeley, the Police Court, has no jurisdiction in these cases.

The Court: Who was this prosecution instituted by; by this doctor in San Francisco that runs the sanitarium, wasn't it?

Mr. A. S. Frost: There were two reports that were forwarded to Mr. Taggart, I believe.

The Court: Well, now, do you people hold that if I have got a remedy like Acmes Alternative, which I say is good for consumption, if I recommend it to Mr. Hynes, that I am guilty of practicing medicine without a license?

Mr. Frost: Oh, no.

The Court: Well, that is about what this case is, as it looks to me. I think the State Medical Board would be in a good deal better business than prosecuting this kind of cases myself. Now, that is the way I look at it. If a man has got anything that is good for consumption, or if he thinks it is good for consumption, the medical fraternity has not found anything that is worth much for it, and it ought to be tried, and I think you people are in mighty poor business trying to prosecute men for simply recommending these things. He hasn't said he was a physician, he hasn't told anybody he was a doctor; in fact, he has particularly said he was not, but he simply has a remedy, like everybody, including every old housewife used to have, and he advises people to use it. Now, that is what it looks like to me, and I think you are in mighty poor business prosecuting these cases.

Mr. Frost: Has your Honor read the transcript?

The Court: Yes, I have read the transcript.

Mr. Frost: Well, your Honor, I don't agree with your Honor about what the facts are.

The Court: I know you don't; I know you don't agree with me on this prosecution.

Mr. Frost: If your Honor desires to hear from me, I will be glad to state what I consider the facts in the case.

The Court: Well, I have read the transcript; I know what the facts in the case are. This man may be placed on probation for the period—

Mr. Hynes (District Attorney): Just a moment. I understand from Mr. Smith that the testimony showed that this man had cards printed as a specialist.

Mr. Frost: Yes, and he had an office.

The Court: I don't think that is practicing medicine.

Mr. Frost: And he collected fees for it.

The Court: Of course he would have a right to collect fees. Every drug store sells a specific and collects fees for it, don't they?

Mr. Frost: Yes, you go in and ask for a particular drug, they have a right to sell it; but this man prescribed his own remedy. The person he

went to didn't know anything about the remedy, and he prescribed it.

Mr. Hynes: If the Court please, I have not read the transcript in this particular case, but the viciousness of this particular kind of thing, if there is any, it seems to me might appear in this, that if a man is permitted to do this sort of thing and prescribe these kinds of remedies, there is no reason why a man like Bohannas can't prescribe medicines for cancer, and things of that sort.

The Court: Well, you have fixed it up so he can.

Mr. Hynes: I have tried to get him a number of years.

Mr. Frost: Just a moment. I am informed by Mr. Taggart that the case was reported through the Berkeley Police Department to Dr. Betten, the health officer there, and that Dr. Betten reported it to him, to the State Board of Medical Examiners.

Mr. Hynes: We haven't any objection to the man being placed on probation, if the Court please, but we were under the impression that one of the conditions of his probation should be that he ought not to prepare and sell these medicines.

Mr. Frost: Ought not to prescribe them.

Mr. Hynes: Ought not to prescribe them anyhow.

Mr. Frost: There are no objections to his selling them at all, but if he prescribes them, or in any way holds himself out as competent to practice medicine, why then he is practicing medicine under the definition as given by our Supreme Court. I don't think he ought to be permitted to do that.

The Court: Well, he may be placed on probation for the period of three months. There are so many apparently reputable physicians in this State—I won't say reputable physicians, but physicians that have got a certificate—who have no business to practice medicine, that if the Board would devote their attention to them, I think they would do a good deal more good. They are like some lawyers that have no business to be practicing at all.

DR. FRIEDMANN'S TUBERCULOSIS REMEDY.

By FRED I. LACKENBACH.

From the highly sensational accounts in the lay press, of this new "cure" for tuberculosis, one is strongly tempted to dismiss the subject without essaying to dissect out the kernel of truth which undoubtedly gives credence to Dr. Friedmann's discovery.

It would appear from a critical analysis of the reports at hand, that Dr. Friedmann has applied an old and established principle, and his main departure from methods commonly employed in the production of artificial immunity against the tubercle bacillus and its toxins, is the employment of a cold-blooded animal—the turtle—as a means of depriving the bacillus of its virulence without impairing its capacity as an immunizing agent. By just what means this is accomplished, Dr. Friedmann has not made known.

Since Dr. Robert Koch introduced his original tuberculin in 1890, a great many attempts have been made to modify the toxicity of the immunizing agent. There are at present in use a large number of preparations which are modifications of Koch's original Tuberculin ("O. T."), or suspensions of the cell substance, as Tubercle Residue and Bacillen Emulsion. These latter are essentially bacterial vaccines. In practically all of these preparations the unaltered bacillus or its toxin is the groundwork. The type of tuberculin arises from the different manipulations of these elementary substances.

The object aimed at in the employment of these

various cell, or bacterial cell derivatives, is to produce a maximum of immunity against the tubercle bacillus and its toxins, with a minimum of toxic reaction. The toxicity of these products and the severe reactions arising from their employment has necessitated their employment in very moderate dosage. As a consequence the process of immunization proceeds very slowly.

It would appear that Dr. Friedmann employs for immunization purposes, live, instead of dead bacilli, these live organisms by cultural processes being deprived of their virulence, and are at the same time capable of producing a powerful immunizing response when inoculated into tuberculous human beings.

In vaccination against smallpox, the virus is attenuated (made less virulent) by passage through the calf. In immunizing against hydrophobia, the virus is attenuated by drying over potassium hydroxide. Live cultures of the bacillus typhosus are said to yield a better immunizing response than the employment of the devitalized bacteria. Attenuated cultures of the B. anthracis are employed for vaccinating cattle against anthrax.

To quote from Dr. Friedmann's paper read before the Berlin Medical Society, November 6, 1912: "The remedies recommended by Koch himself, as well as the numerous other preparations which are derived from a culture of the tubercle bacillus, are based on the right principle and have a similar action. For the true recognition of the fact that the antigens are contained in the exciting agent itself, has been for some time the basis of all therapeutic researches in tuberculosis.

"It has been tried to produce the active substances of the bacillus in the pure state by the most varied methods . . . in all the various methods used in the preparation of curative agents up to the present time, virulent strongly toxic-acting bacilli of either human tuberculosis or cattle tuberculosis have been the starting point. These, in spite of all endeavors to remove their poisonous properties through special procedures had the power naturally of causing considerable damage, or at least danger to the organism.

"Furthermore, through these energetic measures the exceedingly delicate antigens, i. e., the things which are able to form the specific antibodies, were damaged. Hence the task was to find as a curative a substance absolutely harmless even in large doses, which should contain, if possible, all the specific properties of the exciting agent, excepting its toxicity and virulence.

"This then had to be an avirulent atoxic bacillus, but this avirulence, this freedom from all pathogenic power, could not be attained through any severe treatment of the cultures through various additions, etc.; it had to be a bacillus of natural avirulence and moreover it had to be avirulent and atoxic in tuberculosis, as well as in non-tuberculosis individuals. And finally the exceedingly delicate antigens could not be affected by the slightest treatment; hence it had been a living bacillus. For even the apparently mildest methods of killing the bacillus affected the finest molecular constitution of its organism.

"All these factors being considered, a substance adapted to the cure of tuberculosis must fulfill the following conditions: it must consist of genuine living bacilli of natural, complete avirulence, and not subjected to any deleterious influences, additions, etc. . . . Only after I had succeeded in removing the last and slightest traces of virulence through proper transplantations and passages, did I employ the preparations in humans. At first I repeatedly injected myself, then tuberculosis adults, then tuberculosis children, and finally, as the curative effects were constantly confirmed, I injected children for purposes of immunization.

"Up to the present time I have treated with this preparation 1,182 individuals. I would go far

beyond the time at my disposal if I should go exhaustively into all the details of the preparation of the material (selection of culture medium, age and nature of the culture, its further elaboration and dosage). Only let this be emphasized, that the result is only ensured by the careful consideration of all these factors, which were gradually disclosed after years of painstaking work.

"Before I present to you the results in various classes of tuberculosis cases, I beg to express at this time my thanks to the numerous gentlemen who encouraged me through their confidence in my work, and who supported me by sending patients. And above all, through their constant corroborative observations and examinations: Drs. Bier, Hildebrandt, Schleich, Erich Mueller, Heymann, Blaschko, Neisser, Kuester, Gluck, Galewski, Karfunkel, Pulvermacher, Schwenk, Pannwitz, Oppenheim, Hennig, Solms, Nagelschmidt, Saalfeld, Mohr and Dosquet.

"In every method of use—subcutaneous, intramuscular, intravenous, per os, conjunctival, locally applied to exposed tuberculosis areas—the preparation has shown itself to be absolutely harmless, even in large doses. The treatment exists in its intramuscular administration, once, twice, or three times (seldom oftener), at long time intervals. Success or non-success depends upon the complete absorption of the preparation. An infiltration must be formed at the site of injection, in size between that of a nut, and a small apple, which in the course of the succeeding weeks or months gradually disappears. So long as the tissue exists and is being gradually absorbed, the healing takes place.

"Only when the injected remedy is completely taken up and remains in the body, do the striking curative effects appear. These regularly appear soon and continue. Under the influence, often of but a single injection, we see bone and fistulae of several years' standing become clean and closing.

The paper closes with a considerable number of case reports covering various tuberculosis infections and demonstration of cases.

DIABETES-MELLITUS.

I am undertaking an exhaustive research into the pathology, etiology and diet-therapy of Diabetes Mellitus. I am very anxious to hear from every physician in the United States who has a case under treatment, or who has had any experience in the treatment of this malady. Von Noorden says "the best treatment for the diabetic is the food containing the greatest amount of starch which the patient can bear without harm." If any physician who reads this has similar or contrary experience and would take the trouble to write me, I would esteem it a special privilege to hear from him; if only a postal card. Kindly address William E. Fitch, M. D., 355 W. 145th street, New York.

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Non-Official Remedies (1912), and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-Official Remedies":

Calcium glycerophosphate is monohydrated normal calcium glycerophosphate $\text{Ca}(\text{CH}_2\text{OH}.\text{CHOH}.\text{CH}_2)_2\text{PO}_4\text{H}_2\text{O}$, containing 90 per cent. of anhydrous salt. It is a white powder, almost tasteless, slightly soluble in water, easily soluble in dilute acids. Glycerophosphates were introduced as "nerve foods" on the belief that the phosphorus

was in a readily assimilable form. Recent animal experiments indicate that glycerophosphates possess no advantage over inorganic phosphates in phosphorus metabolism. Dose 0.2 to 0.65 Gm. in powders, wafers, capsules or tablets suspended in water or syrup, or dissolved by the addition of sufficient citric acid or diluted hydrochloric acid.

Calcium glycerophosphate, Monsanto, is a non-proprietary article and complies with the tests laid down for calcium glycerophosphate. Monsanto Chemical Works, St. Louis, Mo. (Jour. A. M. A., Jan. 4, 1913, p. 45.)

Slee's Refined and Concentrated Diphtheria Antitoxin is prepared according to Banzhaf's method. Supplied in packages containing 1,000, 2,000, 3,000, 4,000 and 5,000 units, in vials and also in syringes. The Abbott Alkaloidal Co., Chicago, Ill. (Jour. A. M. A., Jan. 4, 1913, p. 45.)

Vacules Cornutol contain cornutol 30 cc. in sealed ampules. The air in the container is removed before sealing whereby, it is claimed, deterioration is retarded. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Jan. 4, 1913, p. 45.)

NEW MEMBERS.

Jones, H. W., San Luis Obispo.
Bush, H. C., Colfax, Cal.
Ellis, W. L., Glenn, Cal.
Downing, W. E., Suisun, Cal.
Leachman, R. S., Vallejo, Cal.
Avery, Sam'l. D., Watsonville.
Congdon, W. R., Santa Cruz.
Hall, Geo. P., Sunnyvale, Cal.
Greenwood, Edna M., San Jose.
Loehr, Bert E., San Jose.
Purkitt, Theodora T., Willows, Cal.
Bernard, J. H., Truckee, Cal.
Peck, R. E., Winters, Cal.
Yates, Jno. C., San Diego.
Hensel, E. A., San Diego.
Johnson, Wm. J., National City, Cal.
Pollock, Robt., San Diego.
Burnham, M. P., Los Molinas, Cal.
Whittington, W., Dinuba, Cal.
Helgesen, S., Templeton, Cal.
Clarke, B. F., Paso Robles, Cal.
Randolph, Jno. A., Willows.
Gardner, J. T., Willows.
Lund, Chas. W., Willows.
Lund, Etta S., Willows.
Tremblay, F. X., Willows.
Lawson, Frank M., Willows.
Gatliff, W. W., Butte City.
Yates, H. N., Pacific Grove.
Harbaugh, Dorothy F., Loma Linda, Cal.
George, W. S., Antioch.
Sweetser, G. W., Crockett.
Jones, Jno. T., Grass Valley.

DEATHS.

Borland, Robert, San Francisco.
Potts, John S., San Francisco (Died in Los Angeles).
Arndt, H. R., Cleveland, Ohio (formerly San Francisco).
Schirman, M., San Francisco.
Brown, Eugene E., Martinez.
Hansen, Geo. F. (Petaluma, Cal.), formerly of San Francisco.
Blanev, Chas. H., address unknown.
Watkins, Antoinette Q., address unknown.
Steen, D. B., Los Angeles.
Young, C. C., Los Angeles.
Dogge, O. H., address unknown.
Kierulff, B. F., Los Angeles.